THE BUILDER

A JOURNAL FOR THE ARCHITECT AND FOR ALL INTERESTED IN THE CONSTRUCTIVE AND DECORATIVE ARTS.

VOL. CV.—No. 3693. NOVEMBER 14, 1913.

THE FUNCTION OF ORNAMENT.

THE literary critics of architecture have nearly always attached a quite disproportionate value to ornament. They have looked at the ornament rather than the building itself in their estimates of architectural excellence. A passage from Ruskin's "Seven Lamps of Architecture" shows this very clearly. We feel that no apology is needed for quoting it in full because the beauty of the writing is such as to form an excuse in itself even were its meaning not apposite to our thesis.

At the close of the chapter on "Sacrifice," he writes: "It is not less the boast of some styles that they can bear ornament, than of others that they can do without it; but we do not often enough reflect that those very styles, of so haughty simplicity, owe part of their pleasurableness to contrast, and would be wearisome if universal. They are but the rests and monotones of the art; it is to its far happier, far higher, exaltation that we owe those fair fronts of variegated mosaic, charged with wild fancies and dark hosts of imagery, thicker and quainter than ever filled the depth of midsummer dream; those vaulted gates, trellised with close leaves; those window-labyrinths of twisted tracery and starry light; those misty masses of multitudinous pinnacle and diademed tower; the only witnesses, perhaps, that remain to us of the faith and fear of nations."

Truly "a mist of fine words" (the phrase is Ruskin's) in which the critical faculty is apt to be lulled to sleep by the wealth of beautiful images and skilful and subtle alliterations. But there emerges clearly enough the central fact that Ruskin considered the highest style of architecture to be that which was literally encrusted with ornament, and that the simpler styles owed a great deal of their value to the fact that they acted as foils to the "far higher exultation" of the more ornate forms. On another page he writes, "It is one of the affectations of architects to speak of overcharged ornament. Ornament cannot be overcharged if it be good, and is always overcharged when it is bad."

Now this attitude towards ornament—an attitude common to writers of the last century, and to some even of this—seems to us essentially wrong. As Professor Blomfield said in his admirable Presidential Address to the R.I.B.A. last week, "The problem of architecture does not lie with ornament, and the epoch-making discoveries in the art have arisen from practical necessities handled in the most direct and even uncompromising manner." In other words, ornament is the handmaid of architecture, and no amount of it, however fine, will transform a poor building into good architecture. Its principal function, surely, is to emphasise the good points, rather than to conceal the weak ones of the structure upon which it is placed. As soon as this is done we think he will be a wise architect who will stay his hand and not add an inch of ornament for its own sake. If his work has been well done, the absence of superfluous ornament will enable the basic merits of his design to be seen, and if he has made mistakes, it is surely good that they should be plain to the eyes of those who come after so that they may be rectified by the next generation and progress achieved.

This will sound to many a counsel of perfection, and perhaps it is not to be expected that a man should do work mainly as a help to posterity to do better; such altruism would be a little more than human and stamp its possessor an unbearable prig. But it must not be forgotten that there is no finality in art, and that even the greatest artists are no more than signposts pointing out the road that all must travel to an end that can never be reached. We think, therefore, that an architect should be content to let his reputation stand or fall by his ability to plan, to compose in masses, to get satisfactory and reticent contours, rather than by designing "fair fronts of variegated mosaic, charged with wild fancies and dark hosts of imagery," picturesque though they may be.

And here let us say a word about the Gothic ornament which Ruskin had in mind when he wrote the words we have just quoted. At its best we agree that it was magnificent, but at its best it was always restrained, always subordinate to the larger forms on which it was placed. Later on, when it had completely captured the imagination of the builders of the day, it became one of the most important factors in the downfall of the Gothic style. It is worth noticing, too, that the west front of Peterborough, by common consent one of the finest achievements of the Gothic genius, depends for its effect almost entirely on proportion, mass, and line, and hardly at all on ornament.

Again, it must be remembered that Gothic was primarily an architecture of churches, and that the churches of the period were used as a kind of picture-books to impress on a rude and unlettered people the stories of the Bible and the legends of the saints. They had, in fact, an ulterior motive in their design as well as a purely æsthetic one. Perhaps even the style was more or less unconsciously developed in a direction which would lend itself best to unlimited story-telling. In more highly-cultured civilisations the need for this is not present, for when people can read it is better to tell stories in words than through line and form. Granting, then, that it was legitimate, or at least pardonable, to cover the walls of mediæval cathedrals with "sermons in stone," because the architect had to appeal to a public for whom the refinements of the art had little meaning, we cannot allow the same latitude nowadays without implying that we are intellectually on a level with the thirteenth century, an admission we should be very sorry to have to make.

If we consider how the Athenians, probably the most highly-cultured community the world has ever seen, used ornament, we shall probably get a better guide for our own practice. But it would be a mistake to apply Greek principles rigidly to our own needs, for our problems are very different and very much more complex than theirs. In fact, it can be said that the Greeks set themselves no constructional problems at all in the sense that we understand the term. They never attempted to roof over vast spaces with stone vaulting which would set up complex strains and thrusts necessitating elaborate buttressing. They did not dream of setting a circular dome on a rectangular base. The trussed roof, which was the invariable method for covering their temples, is, so far as it affects the walls on which it rests, merely a lintel—that is to say, it has no outward thrust, only a downward pressure due to its weight, which, since it was made of wood, is not very great.

But this very absence of structural problems enabled the Greek mind to concentrate on refinements of design and to consider the question of ornament from a practically abstract point of view. They had no need to use ornament to conceal an awkward bit of construction. Their style of building left them perfectly free to place their bands and panels and mouldings wherever they wanted them. And the first thing that strikes the beholder is the extremely small amount of ornament they thought suitable, at any rate, of sculptured

ornament. As to the amount of painting they placed on external walls opinions differ; but it seems safe to conclude that a nation so extremely reticent in every other department of architecture would never have perpetrated the blaze of crude discordant colours with which some archæologists have credited them. At least, we can feel absolutely certain that their mural paintings made no attempt to give relief, and never violated the feeling of flatness which a wall ought to possess. The Parthenon frieze, placed high up on the cella wall behind the columns where it could only be seen with difficulty, is a splendid instance of the right way to treat ornament. A band of low relief was wanted on the cella wall to emphasise by contrast the flatness of the rest of the wall and to form a finish to it; and it was placed, not where the beauties of the sculpture could best be seen, but where it would have the best effect as an architectural feature. We wish we could think that a modern sculptor who executed half as good work as the Parthenon frieze would be content to see it "skied" for the sake of its architectural effect, but we fear it is more likely that someone with more leisure than brains would start a subscription to build a museum in which to house it.

We cannot too strongly insist that no ornament, however fine a work of art it may be in itself, has the right to a separate existence. The phrase "Ornament for its own sake" is a contradiction in terms. Whenever a piece of sculpture in the round or a bas-relief is placed on a building because it is a pretty piece of work and needs a home the architect is allowing his part of the work to sink to the level of the frame-maker, whose function is merely to give an unobtrusive setting for creative works of art. The fact that the Parthenon frieze happens to be a supreme piece of creative art did not concern the architect at all. He looked upon it merely as a nice frieze for his wall, and quite rightly thought more of the wall than of the carving because it was his business to think first of the wall. Where there was a "hole" in his design—the tympanum—he gave the sculptor *carte blanche* to design a self-contained work of art, not an ornament, and contented himself with framing it with very delicate and refined mouldings.

Modern problems are too complex to admit of so clear-cut treatment as the Greeks were able to apply to their simple buildings, but we think that with proper modifications the spirit in which the Athenians approached the task of ornamentation is the spirit in which we should approach it to-day. It is no doubt true that the exigencies of modern planning, and the large use which has to be made of more or less engineering work, necessitate the employment of many features which it is undesirable to allow to appear in the finished structure, and which are in consequence concealed under a crust of ornament. We must regret the necessity for this kind of thing, but the true genius of the art lies in bending these necessities to its own advancement, not in evading problems which it ought to be strong enough to overcome.

NOTES.

Competition and Public Bodies.

THE subject of competition and its limitations has been under consideration by the Warrington Education Committee at one of their meetings, brought up by a resolution submitted by a member to the effect that a school competition should be limited to those architects who had for the last three years been practising in the county borough instead of the competition being open to outside architects. An equal number of votes being cast for and against the resolution, the matter was referred back. One member asked where consistency came in, as, if a new head-teacher had to be appointed, applications were invited from outside, although there was a possible choice of 100 if the selection were limited to Warrington, and somewhat pertinently urged that it was illogical to "protect" the five or six local architects in the circumstances, and in addition to propose that each one of them should be paid a fee for competing. Another member pointed out that money would be saved if the Education Committee appointed an architect of its own. As we have said before, we feel that the practice of instituting competitions for small buildings has become too universal, and is likely to give public bodies an unreasonably slight idea of the value of an architect's services, and for this reason we have urged that it would be in the interests of the profession if a greater number of public buildings were given directly to some architect or other. We think in the case of education authorities that a useful plan might be to call for open competition for every fourth or fifth school to ascertain whether they were getting the best results from architects they had previously employed; but to give the schools which were not competed for to architects whose executed or competitive work had reached a high standard. In this way the competitive system would be employed, as we believe it should be, as a corrective test; but the profession would not be burdened with a competition for every building of a certain type, and men would obtain a fairer reward for proved merit and ability. Architects, like everyone else, are likely to do their work better if they have to depend on their proved ability, but, good as fighting is, they want periods of rest in between.

Mr. March Phillipps's Reply.

MR. PHILLIPPS has replied to the parts of Mr. Blomfield's opening address at the R.I.B.A. dealing with the amateur criticism of architecture. For once we find ourselves in most hearty agreement with Mr. Phillipps, who says that the address affords "an excellent example of the difference between professional and lay criticism as well as an indication, it may be, of the right province of either." The difference, which is a marked one, seems to us to be clear, and consists in the fact that Mr. Blomfield speaks as one having authority and not as the Scribes, while Mr. Phillipps writes as one having theories mainly based on sentiment and not inspired by knowledge, which can alone make criticism useful. We agree, too, that there is a right province for either. The right province for sound criticism based on facts is for those who really wish to understand what is and what can be; the right province for the criticism which is not founded on facts but on sentiment is for those who wish to nourish pleasing illusions. Romantic literature is a field of its own in which we may dream on irrespective of facts, enjoying a mental realm of fancy which we can people with monsters and angels of our own making. The "Arabian Nights' Entertainments," the "Rose and the Ring," the heroic legends of Greece, and the old Norse sagas are delightful reading, and have a use of their own; but if we want to know what actually occurred in the ages of the past they are not the works which we shall study. In the same way we shall always find pleasure in reading Mr. Phillipps's "Romance of Architecture," and delight in his picturesque periods, but we shall turn to them for literary relaxation and not for architectural knowledge. But just as Mrs. Shelley's Frankenstein could not have been thought of by anyone with exact scientific knowledge, neither can Mr. Phillipps's caricature of the sinful architect be arrived at by those who really know the facts; but we welcome such wealth of imagination now and at all times.

River Pollution.

IN the annual Report of the Medical Officer for the County Palatine of Chester attention is drawn to the pollution of our rivers, and complaint is made that so little has been done towards their purification. The cause of pollution that seems to be the most difficult one to deal with is the effluent from mining districts, and from certain types of manufactories. Although there is legislation dealing with this question, it appears to leave a loop-hole of which the manufacturers are not slow to avail themselves. It is quite easy to realise that in the early days of our manufacturing expansion the general object of legislation was to encourage it and not to harass it with undue restrictions. But times have changed rapidly since then. Our manufactures are firmly established, our ideas of sanitation have advanced, and there is a much larger class of well-to-do and well-educated men who have more leisure and inclination to enjoy the beauty of the country and to concern themselves with the state of our rivers. Evidently the time has arrived for tightening up our legislation on this question. We imagine the resources of science are not yet exhausted, and that under pressure from the State a means would be found of dealing with the cause of pollution. Another point to which attention is directed is the difficulty experienced by Councils having control of the lower reaches of a river whose source is under a different jurisdiction. Many of the Cheshire rivers, we are told, are hopelessly polluted before entering the county by the mining districts of North Staffordshire. Two reflections are suggested here. The first is that, although mining districts cannot be moved to the mouth of our rivers, manufactories of an offensive type could and should be so placed that their effluent shall not cause annoyance to the inhabitants of districts between them and the sea. The second is that there should be an authority with control over the whole of a river from its source to its mouth, and that the care of all our rivers might reasonably be overlooked by one central authority.

MR. JOHN BELCHER, R.A.

We much regret to have to announce the death, last Saturday, of Mr. John Belcher, R.A. As many of our readers know, Mr. Belcher practised for some years in the City at Adelaide-place, London Bridge, in partnership with his father, and carried out numerous buildings in the City. He subsequently practised independently, and carried out many well-known buildings which obtained for him the reputation of one of the foremost of our architects. An interesting specimen of his earlier manner is Messrs. Mappin & Webb's premises in Cheapside.

The principal works which secured his reputation as an architect are the Chartered Accountants' building, which is, unfortunately for lovers of architecture, hidden away among back streets, but in which he showed how admirably and harmoniously sculpture could be used in conjunction with architecture; the Colchester Town Hall, one of the earlier instances of the use of a more Classic manner in the treatment of public buildings; and his restorations of Stowell Park, Gloucestershire, for Lord Eldon.

Many of his unsuccessful competitive designs were of great and outstanding merit, among which may be instanced his beautiful design for the completion of South Kensington Museum.

His later work included many buildings of a commercial character, among which we may mention Messrs. Whiteley's new premises; Electra House, Moorgate-street; offices in New Broad-street; and his interesting designs for additional buildings for the Zoological Society and the Royal Insurance Buildings at the corner of St. James's-street.

In much of his earlier work he was assisted by Professor Beresford Pite, whose individuality can be traced, especially in the Institute of Chartered Accountants' building.

Mr. Belcher was one of the prominent men whom the profession was fortunate in having as a leader at a time when we were bridging the gulf which lay between the period of picturesque and semi-Gothic revivals to the more classical paths, towards a more orderly and stately rendering of architectural problems, and his work up to the last shows, as might be expected, strong traces of the freer and more picturesque handling of architectural problems which characterised the earlier schools of thought.

Mr. Belcher was President of the Royal Institute of British Architects from 1904 to 1906, presiding during his term of office over the Seventh International Congress of Architects in 1906. He was elected an Associate of the Academy in 1900 and a full Academician in 1909. He was also a member of the Phœbe Hearst University of California.

Unlike his contemporary, Mr. J. M. Brydon, whose untimely death at a time when he had at last secured full recognition of his abilities all lovers of architecture deplore, Mr. Belcher has passed away at a time which has allowed him to see the full fruition and reward for his long and indefatigable labours on behalf of the calling which he both loved and honoured.

He will be remembered by all as an architect, and by those who knew him well as a man of singular refinement, modesty, and personal charm, and we shall feel the poorer by the loss of his presence, while we shall always remember him with affection and esteem.

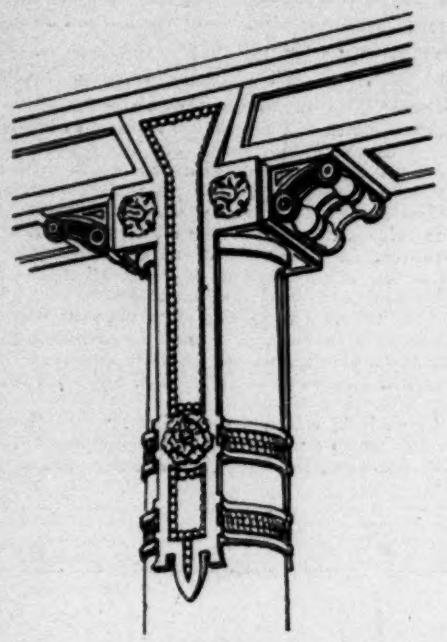
A list of some of the work carried out by Mr. Belcher will be given in our next issue.

QUEEN'S HOUSE, KINGSWAY.

A block of offices, to be known as Queen's House, is being erected next to the new Public Trustee building in Kingsway, with a frontage also in Lincoln's Inn-fields (Nos. 55 and 56). The architect is Mr. Marcus E. Collins, F.R.I.B.A., Old Broad-street, E.C., and the contract has been let to Mr. C. Gray, Shepherd's Bush. The steelwork will be by Messrs. Richard Moreland & Son, Ltd., Goswell-road, E.C.

A NEW STYLE OR AN OLD ILLUSION.

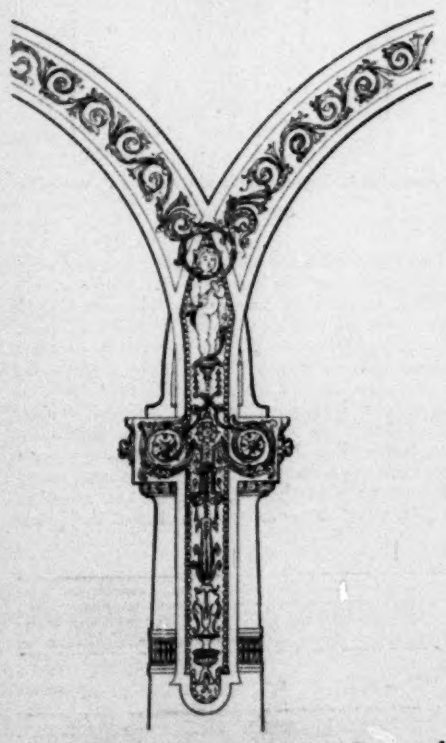
We hear speculations from time to time as to the possibility or advisability of creating a new style which will express "modern wants." Usually, however, the would-be reformers do not go beyond words, and



"American Style Architecture": Treatment of Capitals.

simply leave us with the feeling that there is an elusive something somewhere, a veiled and unknown beauty whose charms would transcend our wildest dreams of architectural beauty.

Mr. Alexander Aimwell Cantin, of 251, West Eighty-ninth-street, New York, claims to have drawn aside the veil, and reveals to us what, with a spirit of patriotism which



"American Style Architecture": Improved Arcade Treatment.

we must all admire, he calls the "American Style Architecture."

Mr. Cantin's explanations and illustrations will either carry conviction or not; in any case, we consider them of sufficient interest to our readers to give his explanatory essay *in extenso*.

Memory and thought play strange tricks with us sometimes, and for some reason or other we think of the Greek legend concerning the creation of the camel. As our readers will remember, the horse was dissatisfied with what the Father of gods and men had done for him, and made complaint to Zeus. Why, he said, when you were creating me, could you not have made me stronger, bigger, and more enduring? Zeus pondered and then created a camel. There, he said, is what you have prayed to be and shall be. But the horse supplicated Zeus that he might remain as he was, even with his defects, to which Zeus consented, but added that the camel should be perpetuated as a reminder to the horse, and that the latter should always tremble when he saw him.

As we have said, thought plays with us, and our readers will have to excuse an irrelevant anecdote, considering it as a psychological interlude.

We learn that the "American Style Architecture" would have given the architects of the Renaissance what they were longing for, and we gather that its introduction will make the existence of the spirits of the mighty dead sorrowful in thinking of what they lost in their earthly pilgrimage.

Mr. Cantin's susceptibility seems to us to be keener than our own, since he has been made uneasy by defects we have not perceived in our "Past-Style Architecture."

Our readers may or may not agree with him, and a careful study of the matter he has been generous enough to publish to the world will better enable them to make up their minds than any words of ours. If we need more scope for the sculptor he gives it to us; if we really long for perforated cornices the chance is here.

We may be, and probably are, old-fashioned. An existence of three-score years and ten naturally conduces to conservatism, but we have read somewhere that no man by thought can add a cubit to his stature.

We have regarded style but as language, and design as the spirit in which we use language; in other words, that the language itself is comparatively unimportant; the use we make of the language which may rise to eloquence is everything.

It may be that time may show us that a new language can be created which will enable us to be eloquent with less thought than before, but we doubt it.

Meanwhile we will not act the part of a clergyman who delays hungry guests by an unduly long grace; the banquet follows, and may good digestion wait on better appetite.

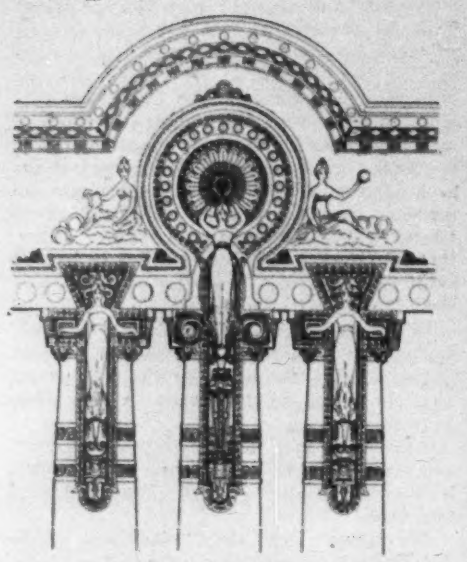
"AMERICAN STYLE ARCHITECTURE":

Invented and Patented by Alexander Aimwell Cantin, 251, West Eighty-Ninth-Street, New York.

The "American style" architecture is the direct result of an effort to fathom the reason for the discarding by the ancient Greeks of the combination of the arch and column in their beautiful structures. The Greeks were aware of the use of the arch; nevertheless not one worthy structure with an arch and column combination that was built by them is mentioned in history. Their refined tastes evidently rejected any combination of arch and column in their style architecture. After eliminating other hypotheses, it is safe to assume that they considered the arch and column combination an unfinished and inartistic design.

Italy is the land of arcades, where full play was given to the designers, and is the best place to judge the merits and demerits of the past styles and compare them with the new "American style." We find that the past-styles arcades show unfinished structures, lacking in cohesion between the column and the archivolt. It is disquieting to the beholder to see arch mouldings dead ending upon the top of the abacus as if the designer could not do better. The addition of an entablature between the top of the column and the archivolt does not beautify the combination, neither does it add to the truth of the construction.

C



"American Style Architecture": Showing Treatment of Capitals.

One of the most noticeable defects in the past-style arcades is the overhanging of the angles of the archivolt over the periphery of the column. This overhanging gives a clumsy effect, and adds force to the impression that the arch is about to crush into small pieces the thin plate of an abacus.

The American-style arch and column together make the most artistic and finished combination ever devised. There are technical refinements involved in the make-up of this combination too lengthy to be described in this article; it is sufficient to say that defects are eliminated and the beauty and finish of the capital enhanced by the proper termination of the archivolt mouldings upon the column shaft.

The "American style" is a style *de luxe*. A talented architect and sculptor co-operating will produce a structure more impressive, beautifully finished, and symbolic of its purposes than any style in existence. The personality of the designers will be powerfully impressed upon the design.

Groups of two and three columns placed in juxtaposition form beautiful combinations. What a fine new field for the designers of expositions!

Magnificent effects are obtained by the use of marble of one colour for the capital and another contrasting colour for the shaft. The formation of the entire capital necessarily produces a more varied and well-constructed appearance when in a colour combination than possible to obtain with the past styles.

The placing of statues upon consoles in the panels of the capitals is an innovation of the first order. Besides the exteriors we have the interiors of buildings to enrich by this means. For instance, theatre foyers and adjacent rooms will make interesting studies for the architects and sculptors; some will use well-known characters from the Classic plays of this and other countries. Our public halls, lobbies, and vestibules will have a new interest for the beholder. Where statues are used outdoors, set upon pedestals above the cornices, they are soon disfigured by the weather, and are too high to be seen to good effect. As placed above the column capital in the "American style" these objections are avoided.

This new method of decorating interiors is important because it is impracticable to use elevated statues, for instance, in a ballroom decorated in past styles.

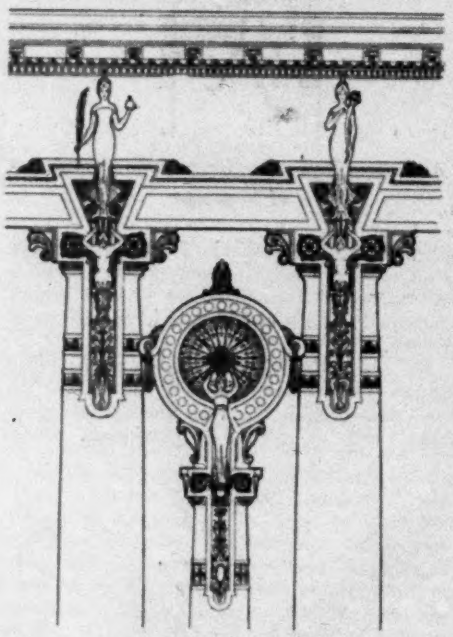
The "American style" adapts itself to the most severe Classical ornamentation or to the most lavish design, depending upon the taste of the designer and the requirements of the structure.

Combinations are readily obtained from this new style that are original in every sense of the word—combinations that are equal to and more flexible than Palladio's.

Of what use are the heavy overhanging cornices? In the "American style" they are perforated in the farthest overhanging part. What beautiful play of shadows are we to have from these perforated cornices! The openwork portions can be filled with tracery or with coloured glass of positive and harmonious colours in heavy frames, the sunlight projecting the colours down upon the frieze among the shadows. A wide field opens out with this idea for the designing of striking effects. Electricity can be used to advantage.

The human figure, the most graceful and pleasing of subjects, as a *motif* for decorating the new style capitals will be very appropriate and will supersede the present tiresome cast-iron appearing designs.

In ancient and modern capitals, where the human figure or bust is used in conjunction with leaf-work, the former is so minute and is

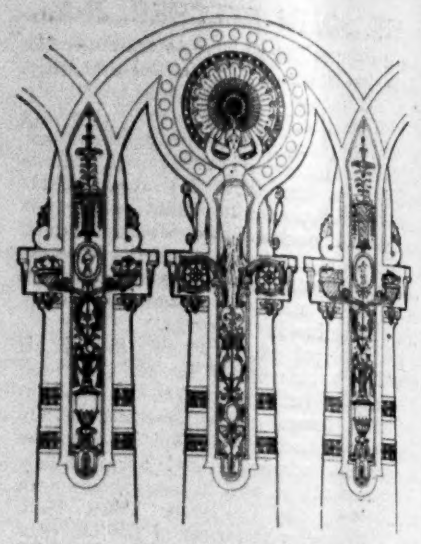


"American Style Architecture": Grouping of Columns.

so confused with the leaves that the significance of the main *motif* is lost upon the beholder.

The capitals of past-style columns placed in elevated positions upon a building look "spotty" (confused). The new-style capitals admit of freer handling, and make a clean-cut appearance viewed from the ground.

The vertical panel of the column capital immediately attracts the attention, and forces the impression that the weight imposed upon the columns is carried directly down and on to the major axis thereof, leaving the receding periphery of the column each side of the panel



"American Style Architecture": Column Treatment.

to play a lesser part. Below the frieze is that portion of the entablature corresponding with the architrave. There is a notorious defect in the past-style architraves; it is, they are too shallow in height to be in proper proportion to carry the heavy superimposed load. This defect is avoided in the "American style" by extending the capital fully up to the underside of the frieze, which member naturally is properly proportioned to the load it carries. That portion of the entablature corresponding to the architrave plays a less important part in the new style, at the same time carrying out its necessary function in the design.

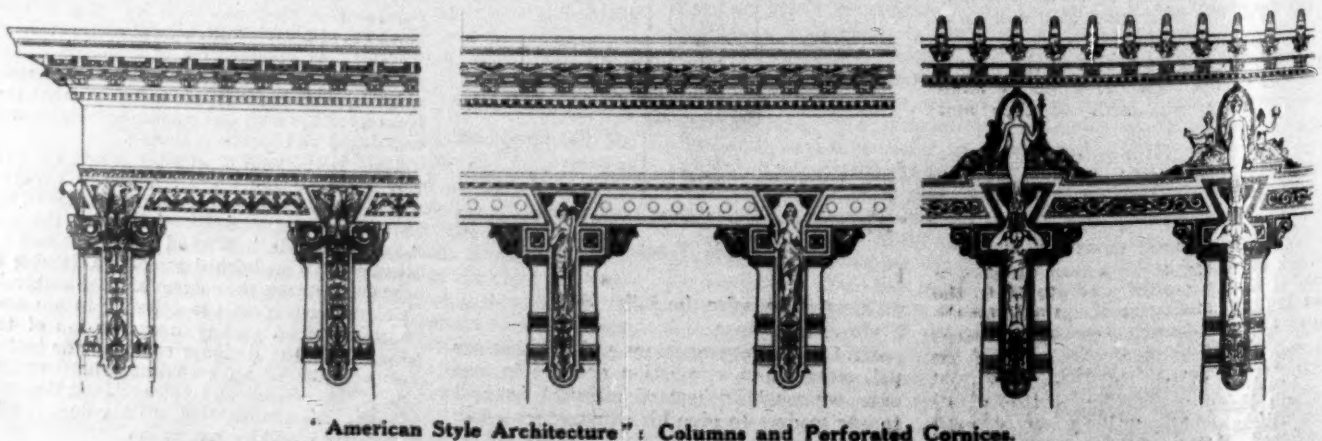
The relief sculpture work in the panels of the capital has a low relief at the base and centre of the panel and a heavier relief at the top, so as to cast proper shadows at the abacus line. The style of Goujon's beautiful figures in the panels of the Fountain of the Innocents, in Paris, is a fine example of the proper handling of this style sculpture.

The dovetail shape of the top of the capital firmly places the column in position between the members corresponding with the architrave, thereby conveying an impression of solidity and good bonding with the superstructure.

The undecorated portions of the column shafts each side of the panels can be ornamented to good advantage.

Had this "American style" been in existence during the Renaissance period architects and sculptors would undoubtedly have used it very extensively. We can imagine what beautiful and appropriate sculpture they would have employed to enrich the column capitals and perforated cornices. As the column capital has the shape of a Latin cross it is safe to say that all of their ecclesiastical architecture would have been in this style and enriched with sculptured Madonnas, Christ upon the Cross, saints, angels, etc.

Such artists as Michelangelo, Donatello, Goujon, Thorwaldsen, and the long list of other celebrated sculptors would have left us a rich heritage of beautiful *motifs* sculptured in stone, marble, and other materials. The Classical style columns hardly appealed to such artists, and they evidently classed such mechanically-formed capitals as not worthy of their steel.



"American Style Architecture": Columns and Perforated Cornices.

A comparison of the "American style" with past styles will convince one that the former is a style more appropriate, flexible, artistic, and better from a structural point of view.

Observe the past-style abacus! One cannot say that it is made thick enough to overcome its appearance of brittleness. The Classical-style columns never were intended to support stories of masonry as we see on every hand. One cannot say that a brittle-appearing abacus gains anything by being supported at the angles, or "ears," by a bunch of foliage. And how do we approve of a bunch of leaves at the top of a column carrying hundreds of tons of masonry?

Architects have been accused of lack of progress and not advancing with the engineering profession. In the "American style" we find a type that will adapt itself to decorate the framework of a building better than any other style of architecture. In proper hands the new style will progress with engineering, and, with the co-operation of sculptors, will develop to a point far exceeding the wonderful work of the Greeks and Romans. We have an unrivalled field to work in; we will be more truthful with our structures, and not use forms that were for other ages.

Plaster capitals in the new style are approximately of the same contour as the column capitals.

What a variety of *motifs* will be placed at the disposal of the talented architects and sculptors for the enrichment of these capitals and perforated cornices! Symbolism illustrating the purposes of the various structures will be highly developed, exceeding the well-known designs of the coats-of-arms used during the Renaissance. It is only a matter of time when a new *motif* will be developed to take the place of present designs for the enrichment of mouldings.

It has been a much-discussed question as to the possibility of developing a new-style architecture. In the "American style" we have a clean-cut, original development. The fundamental principles are absolutely free from plagiarism or adaptation of existing styles, and were originated by a native American architect while studying in Rome. In order to protect his designs the inventor obtained patent protection in England and other countries. This was not done to form a monopoly for himself, but for the purpose of supervising the development of the style. The licence fee covering the privilege of using the style is merely nominal.

Now and then in the past a flurry (passing fancy) of a new mode has ruffled the calm surface of our hidebound traditionalism in architecture, holding the attention for a time and then passing into oblivion. A careful analysis of those modes shows the entire lack of a new fundamental principle; each and every one has been merely an adaptation of something used before.

Architects are being pressed more and more to create a new-style architecture, but they are merely groping in the dark, and have no fixed line of experiment to create something new.

In this new "American style" we have a fundamental principle to construct on. The column architrave, with frieze and perforated cornice, form a new order of architecture to add to the Doric, Corinthian, Ionic, Composite, and Tuscan Orders.

A new factor is introduced in architectural standards by the column and arch combinations. Heretofore a column of any Order was placed under either an entablature or an arch without any change in the formation of the capital. As an arch is an entirely different structure from a entablature, why should there not be a difference in their connection with a column? The "American style" adds to the design of a structure, creates more *motifs*, is more flexible, and, most important of all, makes a finished connection to the column, and, with well-designed sculptured decoration, fills all requirements for beauty, utility, and stability.

A. A. CANTIN.

ARCUEIL AQUEDUCT, PARIS.

As has been done in the case of the three surviving of the elm-trees planted by Marie de' Medici in the gardens of the Luxembourg, a tablet to her memory is to be affixed to the aqueduct of Arcueil, which she utilised for the supply of water to the Luxembourg Gardens that she laid out in 1613. The ruins of the third-century Roman aqueduct, now the Arcueil Canal, were repaired in 1613-24 by Salomon de Brosse, nephew of Jacques Androuet du Cerceau, whom he succeeded as architect for the Luxembourg.

MR. W. CURTIS GREEN (President) took the chair on Monday night at No. 18, Tufton-street at the ordinary general meeting of the Architectural Association.

Mr. L. Elkington (Hon. Secretary) read the minutes, which were confirmed.

Mr. Austen Hall formally proposed the adoption of the Council's Report and balance-sheet for Session 1912-13, as published in the Architectural Association *Brown Book*.

Mr. Percy May seconded the motion, and it was carried.

Death of Mr. John Belcher.

The President said it was with deep regret that he had just heard of the death of Mr. John Belcher, R.A., and he was sure the members would like to send a vote of condolence to the relatives. Mr. Belcher was one of their Advisory Council and a distinguished member of the Association.

Annual Conversazione.

Mr. Elkington announced that the annual Conversazione would be held at No. 18, Tufton-street, on November 20, at 8 p.m., when there would be an exhibition of architects' holiday sketches, painted work and furniture by architects, old pewter, etc. Additional tickets for members' friends could be obtained from the Secretary—single tickets, 3s. 6d.; double tickets, 5s. 6d. each.

New Members.

On the motion of the President the following new members were elected:—

H. D. Ainsworth, Cromwell-grove, W.
A. N. Battle, Lincoln.
C. J. Brandon, India.
A. G. Brian, Berkhamsted.
H. C. B. Brundle, Fulham.
R. E. Bush, Norfolk-street, Strand.
O. Campbell Jones, Dowgate-hill, E.C.
S. Clark, Mecklenburgh-square, W.C.
R. A. Cooksey, Adelphi, W.C.
P. Dangerfield, St. Albans.
H. E. J. Davidge, Streatham.
A. Eade, Darlington.
C. J. Hall, Kentish Town, N.W.
A. B. Hamilton, Bloomsbury, W.C.
A. St. B. Harrison, Beckenham, Kent.
A. K. Hewitt, Great Yarmouth.
P. M. Hill, Wimbledon.
A. Hodges, Chelsea.
P. S. Hudson, Chelsea.
S. F. Irwin, Kingston-on-Thames.
N. K. Jackson, Isle of Wight
P. V. E. Mauger, Southsea.
K. S. Meager, Glamorgan.
Hon. A. P. Methuen, Corsham Court, Wilts.
H. E. Mills, Stokesley.
E. L. Moore, Purley, Surrey.
R. T. Moore, Hampstead.
D. G. Mowat, Camden-road, N.W.
V. Newton-Moss, Herne Bay.
A. H. Page, Bristol.
R. W. Pite, Ealing.
J. A. Russell, Kensington.
J. A. Selby-Bigge, Wilbraham-place, S.W.
W. E. de Souza, care of India Burma Company, E.C.
H. R. Steele, Victoria-street, S.W.
W. Steer, Oxford.
F. O. Webtaer, Forest Gate.
A. S. Whitburn, Woking, Surrey.
W. P. Wigglesworth, St. Albans.
L. T. Wire, Lymington, Hants.

Mr. H. M. Fletcher then read the following paper on

NATIONALITY IN ART.

"We are a body of architects. Whether already in practice, or as yet only learning our art, every one of us is, and will be for the term of his natural life, a student of architecture. And so, naturally enough, our discussions centre mainly upon technical matters, the substance of our daily thought and our daily work. They keep us in touch with reality, and in them is room enough for difference of opinion and the clash of minds. It is vital to us as architects to know what we think, or think we think, about the influence of materials on design, the ventilation of workhouse wards, the profiles of the Parthenon mouldings, the relative positions of the larder window and the fresh-air inlet to the drain. An architect has so much to learn in so short a life that he is apt to fear lest the consideration of subjects not directly bearing on his work be a waste of precious hours. But there may, after all, be something gained by the exploration of such abstract questions as that which I venture to bring before you this evening. I mean, that it may result in the establishment of principles, whereas technical discussions can hardly go beyond the laying down of rules. Grasp the broad principles, whether of an art, or of art itself, or of life itself, and you can make your own rules, or, better still, can do without them. Rules are cramping, principles are liberating; rules are particular, and may even, outside their own sphere of influence, be misleading, principles are universal and obtain in every branch of human endeavour. So I will not apologise for asking you to give an evening to the consideration of what may seem a vague and non-architectural subject.

To begin with, let us try to be sure what we are talking about. "Nationality" is pretty clear, so we will leave it at that. But "art"—ye gods, what is art? Where Tolstoy and Ruskin and a hundred philosophers of æsthetics have failed to define, how shall we hope for success? I think we must be content, instead of defining, to adopt some limited meaning for this evening's discussion only, and leave the general question on one side. Indeed the word "art" is a dreadful word by this time—is it not?—carrying with it the associations of so much loose thinking and fluffy chatter that I believe the world would benefit if it were cut out of the vocabulary of all civilisations for a season of thirty years. During that time other expressions would have been appropriated to most of the outlying ideas now lazily raked together under the general term "art," and the word itself could, with some reasonable hope of lucidity, be reinstated for the otherwise inexpressible residue. In the meanwhile we must put up with it and use it as seldom as we may.

A Definition of Art.

For present purposes, then, let us define it as "imaginative work." I know that, if we chose, this definition would launch us on the equally stupendous inquiry, "What is imagination?" But, with your leave, we will not choose. The treatment of tangible materials—paint and canvas, marble, glass, stone, wood, lead, plaster, and the like—if it is to have any value, must be inspired by imagination, or a power of commune with the unseen, which, in its lowest terms, is a power of conceiving final results before work is begun. But in considering the effect of nationality upon such treatment it will not hinder us, and may be helpful, if we throw our net wider and include the treatment of the intangible in literature and music, to see if these also are not affected by racial environment. That is why I ask for a definition of art no less comprehensive than "imaginative work." Indeed we might go further. Stevenson, writing on Velazquez, asserts temptingly that "technique is art," and certainly technique is the first essential of art. If we adopt this maxim we might make "art" co-extensive with "human work," "human" being taken to imply "purposeful," as contrasted with the repetitive work of a machine or the instinctive work of birds and animals. For although the faculties brought into play, the media or materials acted upon, and the ends in view may be widely different in different departments of human endeavour, as, for instance, the painting of a fresco, a difficult surgical operation, the drafting of an international treaty, the conception of a new town plan, yet, if you take a broad view of life, these differences are not vital. Have the ends to be attained been kept resolutely in view from start to finish, the media or materials applied in the fittest manner for the attainment of those ends, and the faculties of the worker concentrated to the utmost of his power upon those media or materials? Here are the really vital questions. If these conditions have been fulfilled, whatever be the affair in hand, be it fresco, operation, treaty, or town plan, the result will be in a sense a work of art, a piece of masterly craftsmanship; and there is more spiritual kinship

between the great painter (the artist, that is in the narrower sense of the phrase) and the great surgeon, the great diplomatist, the great town-planner—in a word, the leaders, the men who know their job, in all branches of activity—than between the same artist and the men who are doing futile work in his own line. It is the first-rateness that produces kinship, not the occupation.

For one who is sensitive to quality it takes little experience in any department of human work to recognise when he is in the presence of something first-rate. You know the feeling—an impulse to catch and hold the breath while you watch how it is going to work out; a sense of the difficulty of the undertaking; a feeling that one false step may mar everything, then a growing confidence in the easy mastery of the performer; a thrill of silent delight from the depths of your being at the perfect fitness of means to end; the almost unconscious realisation that what you contemplate is taking the very shape, and no other, that it ought to take; and, as a final conclusion, a perception of the infinite sweep and power of spirit over matter. Even where the subject is solemn or tragic, to those whose keenest interest is reserved for treatment the emotion aroused by meet handling is far nearer to delight than to pain, and Othello, Keats's three or four most perfect odes, certain essays of Bacon that seem to contain the distillation of all wisdom in a page and a half, the glass at Chartres, Karsavina's dancing, Wren's houses at Chichester and Salisbury, Beethoven's "Coriolan" overture, the silk painting of Chinese geese at the British Museum, different in scale and importance and mutually incomparable as they may seem, do yet, to use a vulgarism, all "get there" alike, do all rouse that delighted recognition by doing what they set out to do so fully and concisely that you cannot conceive it so well done in any other way.

The Rare Quality of Inevitableness.

Now this rare quality of inevitableness, of perfect fit, of saying exactly what you want to say, can only be attained by a large gift of selection and rejection exercised upon many similar but slightly varying alternatives, and the power of justly weighing the values of these alternatives depends upon a familiarity dating back beyond the days of special training into childhood itself, and therefore working in accordance with racial bent or nationality. This is seen most clearly, of course, in the case of literature, where the words, the very tools which the artist uses, are entirely different according to his nationality. In the French translator's introduction to Tolstoy's "What is Art?" there is an interesting passage which bears on this point. Tolstoy insists that only those works of art can be called great whose appeal is universal, and the translator protests:—

"There is another objection which I cannot help very respectfully putting to Count Tolstoy and also to his French readers. He tells us himself that, although universality must be the mark of true art, 'yet the finest oration, spoken in Chinese, will remain unintelligible to one who does not know Chinese.' And elsewhere he admits that the artistic worth of a work of art abides neither in its substance nor in its form, but in a perfect harmony of form and substance. Now, this being so, I am persuaded that, even if I knew Chinese, the true artistic worth of a Chinese oration would remain beyond my understanding. I should understand its substance, or rather I might suppose I understood it, but this very substance could be truly understood only by virtue of its harmony with the form; and this harmony would always escape me because, not being Chinese, being able to think and feel only in French, I should be without the power of understanding the form of the Chinese phrases. To judge of the mutual agreement of substance and form in a literary work, to estimate its artistic worth, you must be accustomed not only to understand the language in which it is written, but also to think and feel in that language. I am willing enough to agree to Count Tolstoy's dictum that the ideal of art is universality; but for literature, at all events, until Volapük has driven out the languages of the different nations, the ideal of a universal language can never be anything else but the chimera of a generous imagination."

The Example of Literature.

The truth of this cannot be denied by anyone who is sensitive to form, and we can confirm it by an example from our own literature. Swinburne wrote poems in French, as well as in several other languages. A profound French scholar, a lord of language, with the most sensitive ear in the world, he must have been equipped for the task as no other Englishman in our history. What is the result? Frenchmen say that they could not tell that his French verse was not written by a Frenchman, but there is no magic in it. No magic! Now listen:—

> When the hounds of Spring are on winter's traces,
> And the mother of months, in meadow or plain,
> Fills the shadows and windy places
> With lisp of leaves and ripple of rain

How is it done? What is the secret of it?

> Fills the shadows and windy places.

There is not a word in the line, or, for that matter, in the whole stanza, that a child might not use a hundred times a day, but a million children could not weave them into that incomparable texture of sound and rhythm. Genius, of course; but genius working on material so familiar as to give absolute mastery—working, that is, in concert with and not in contest against nationality. Using a foreign tongue, even Swinburne cannot work such a miracle as that, because he has not inborn, and can but laboriously and partially acquire, the instinct for the values of the words he uses, the labyrinth of subsidiary and related meanings they may suggest, the exact effect on the auditory nerves of sensitive hearers that different combinations of vowels and consonants will produce. And what is incontestably true, almost truistic, of literature is, I think, true in varying degrees of other arts. There are certain tuggings at the inmost fibres, stirrings of the heart-strings, which are and can be caused only by sights, sounds, thoughts, and ways so familiar that we have lost all sense of our first acquaintance with them; nay, more—that our familiarity is innate in us, arising from the familiarity of unnumbered generations of our fathers.

The Danish painter, Hammershoi, on a visit to England, was fascinated by the fires he saw—the crackle, the glow, the life in the flames, the leaping and changing reflections on walls and ceiling. "Well," said his host, "you ought to study it, make pictures of it." "Oh, but I cannot," said he; "you see, I don't *know* it!" All the firelight he had known as a child was imprisoned in a blackleaded stove, with a dull glimmer through a talc door.

Nationality in Music.

If we turn to music, we shall hardly find one of the greater composers whose work is not markedly national. Innovators they have all been, working out their own means of expression and their own treatment to developments which lead them far from their fellows even of their own race, so that it needs no special gift for a lover of music to say without hesitation, "This is Chopin, that Schubert, or that Mozart." But always there is a definite national idiom or tang. Try to conceive "Carmen" or "Pagliacci" the work of a German, "Fidelio" or "Götterdämmerung" of a Frenchman or a Pole. The thing is absurd. You may say that the difference is one of scale and massiveness; even that, though, is a mark of nationality. But I think the question is one of more intimate detail than that, and arises from the very turns of phrase and rhythm in the themes they invent. The smallest lyric of Schumann's "Dichterliebe" or Schubert's "Müllerin" is as essentially German as "La donna è mobile" is Italian or Gounod's "Quand tu chantes" is French; and there is no distinction in scale among these little songs. And when you come to ask why, I think you will find yourself in each case brought up against the imperceptible influences of childhood. A musical child is more sensitive than others to the very first tunes he hears—the old cradle songs, the popular music, the folk-melodies by which he is surrounded. Whatever the influences that sway him in his more sophisticated years, the music of his native race is always there in the background, forming his standard of what music really is, to which he unconsciously refers any later conceptions of what it might or should be. Even in the most complex of the moderns you can see it. Among the Eastern Europeans, such as Chopin, Dvořák, and Tschaikovsky, it is patent, of course, to the most careless listener. But Richard Strauss's melodies also come down from the *Volkslieder* through Schubert and Brahms, and even in Debussy's strange tonality do we not catch the wail of Celtic France, the drone of the Breton bagpipe? As to this last, I speak under correction, and should welcome the criticism of any musician in the company. In Mozart alone perhaps do we find music that transcends all racial limitations and rises to the domain of the absolute.

Racial Characteristics.

It would be tedious to make a catalogue of all the arts in this way, but there may be some interest in recalling some of the most marked characteristics of the different races. We must leave the East on one side for to-night—the question is too large—and also the semi-Eastern, Slavonic, and Balkan peoples, who have only within the last century begun to make their mark upon the artistic history of the world. After all, the nations that count for most with us are the five great nations of Western Europe—Italy, Spain, France, Germany, and England—and I do not think it is too much to claim that they count for most, and will continue to count for most, with the world at large. The first broad division, and the one that goes deepest, is that of Latin and Teutonic, which, in artistic matters, corresponds persistently throughout the ages with the division between the Classic and Romantic ideals—the art that concerns itself with types and the art that concerns itself with individuals. In connection with art it may be that Greek would be a truer race-name for the Classic ideal than Latin, for Greece is the fountain-head. But, though the artistic impulse is Greek, the actual mixture of Grecian blood in these modern peoples is negligible, whereas the Roman descent is direct and clear. And on other sides of civilisation—law-giving, engineering, civil polity, and many others—Rome was so much of an originator, has stamped her mark so heavily on the Mediterranean states, that it is convenient and not inaccurate to keep to the usual term. In Greek art this Classic ideal, this searching for a type, is paramount. We see the Greeks possessed of the doctrine, most clearly expressed by Plato, that for each class of object in the world of sense there exists, in the realm of the absolute, the world of mind, a "type"—what Plato calls an "idea"—which manifests in the highest possible perfection all the qualities by whose possession individual objects of each class in the world of sense belong to that class; in a word, a pattern by their likeness to which individuals in that class approach perfection, and by their unlikeness exhibit a falling away. Thus, an eagle is by so much the more an eagle as it approaches in every respect to the perfect likeness of the typical eagle, the "idea" of an eagle, and so with a chair, a horse, and what not, working up to what, in their eyes, was the most important matter of all—a state. I do not mean that Greek artists in early times, or perhaps appreciably at any time, worked consciously under the sway of any such elaborated philosophical doctrine as this—it is not the way of artists or a sound basis for artistic production—but the formulation of the doctrine shows us what were the conceptions floating about in the society where it was formulated, and the general tendencies of the workers. Now it is clear that, if such was the tendency, it made not so much for the expression of strong individual characteristics as for the constant search after perfection, the effort more nearly to realise the ideal by means of improvements in detail on the imperfect realisations of former attempts. And this is accordingly what we find. The general form of the Doric temple was early decided upon, and from the rude beginnings at Corinth and Olympia—themselves only the stone derivatives of much earlier wooden originals—there is a constant advance by slight alterations, changes in the number of columns, refinements in their spacing and in the profile of mouldings, the substitution of curves for straight lines to correct optical illusions, greater delicacy and more exquisite placing of enrichments, till we reach the final glory of the Parthenon, the closest approach to the "idea" of the Doric temple attainable by human imagination and handiwork. But through it all the original conception persists.

Development of Sculpture.

So with sculpture; you can watch the slow development, the gradual realisation of godhead from the grinning idols of the early age, step by step, line upon line, here a little, there a little, but without any violent break or marked change, up to the miraculous

consummation of the Olympian Apollo and the Phidian Athena.

And this preoccupation with the type, rather than with the individual or the peculiarity, is the hall-mark of the Classic or Latin school of art. Take French Gothic architecture. In the common acceptance "Gothic" is the antithesis of "Classic," but, though diluted with the Gaulish, Frankish, and Norman strains, in France the Latin genius tells clearly throughout. See the gradual development, by variation in detail rather than in conception, of the great cathedrals, Notre Dame, Chartres, Amiens, Rheims. Contrast it with the almost wilful individualism of Wells, Salisbury, Winchester, Lincoln, so different one from the other, so experimental. The logical French mind early satisfied itself as to the most excellent method of covering a space, and you find the simple quadripartite vault persisting all through the Middle Ages, almost to the exclusion of other vaulting systems. Our individualist tendency leads us, having used this simple method once or twice, not to be content with exploring its further possibilities, but to wander off into something quite different, so we cover our vaults with a maze of subsidiary ribs, not so much for structural expression as in order to do something individual and different, until almost by happy accident they evolve themselves into a new structural method, the great fan-vaults of Westminster, Windsor, and Cambridge. Again, the French decided that height was a virtue in a cathedral; and again you see the same gradual development, from Notre Dame (110 ft.) and Chartres (106 ft.) to Rheims (125 ft.), Amiens (147 ft.), and the climax in Beauvais (157 ft.), where vaulting ambition at last o'erleaped itself. English builders, of course, did not aim at height, so that we can make no comparison of value here except to note, in general, how little reference, compared to the French, they made to what had gone before, striving rather to make each new building, and even each new part of a building, a fresh creation. Even the effect of length, which they undoubtedly valued, seems more often to have been got by accretion than of set purpose.

The Translation of Ideas.

So it continues down to the present day. The great architectural school of the Beaux-Arts has continued in almost unbroken progression and imperceptible change since its foundation by—Richelieu, was it not? Whatever ideas it has imported, it has always translated into French. The Colonnade of the Louvre, the buildings in the Place de la Concorde, are results of the Italian Renaissance, but they are as definitely French, as distinct from contemporary Italian buildings as Amiens from Milan. The Gothic outburst of the nineteenth century was sporadic, and has practically disappeared, because it was outside the main line of development. We for the last hundred years have organised a series of piratical expeditions to Greece, mediæval France, Venice, Holland, Byzantium, and have brought home and hung the bleeding trophies all over our buildings in the shape of crude and untranslated details, forms, and decorations. The latest raid has been on the Beaux-Arts itself, and we see the usual result in an outcrop of steep roofs, zinc crestings, Greek profiles, and Union Jack glazing. The robber chieftains are waving the flag, as usual, like their predecessors, and calling out that they really have got the right thing at last. So did all the others, but they hadn't. Nothing is the right thing for us until you have translated it into the terms of its surroundings and made it English. In a dozen years the latest fashion will be what its conveyors probably call "vieux jeu." Look at Grosvenor-place and be warned in time.

Devotion to logic is indeed perhaps the leading note of the French genius. In literature it manifests itself in exquisite clearness, symmetry, conciseness—all the qualities that delight us in the best French prose. Read "Candide"; the merciless logic makes it a cure for too easy optimism that reminds you of the modern treatment of rheumatism by bee-stings. And this devotion to logic finds its outcome in conduct with a thoroughness impossible to the more good-humoured, less theoretical English nature. Recall the motor bandits who a year ago set up a reign of terror over half France. You feel aggrieved with society in general. You thereupon hire or steal a motor-car, surround yourself with all the newest explosives and scientific apparatus for destruction, and rush about the country, dealing death and annihilation broadcast on all the members of society who come in your way. Our race has never produced, and I doubt whether it can ever produce, so perfect a theoretical and practical logician. It seems a heavy price to pay for a high racial development of the reasoning faculties, but it is easy to recognise in it the temper of mind that built Beauvais.

Responsibility of Climate for National Traits.

It would be interesting to speculate how far climate, and especially atmosphere, is responsible for national traits. The air of Greece is what Shakespeare calls "nimble"; there seems to be nothing between you and the sun—outlines are expressed with the divinest purity, the rocks and marbles and hills seem to beat back all the light that comes to them from the sky. Cross the Adriatic to Italy. There is a kind of sumptuousness in the very atmosphere, that clothes the mountains with colour and answers to, or causes, the sumptuousness that is the note of the Italian genius. And with us, throughout our artistic development the most curious thing, considering what manner of men we are in other respects—empire-builders, freedom-lovers, constitution-makers—is our love of the pretty, the small, the homely. Is not this to be traced to the small scale of the English landscape, divided by hedgerows, bounded with woods and copses, changing at every county with the geological variety of the soil, and limited for many days in the year by the moist atmosphere that cuts off everything beyond a range of two or three miles?

Well, what is to be done about it all? What is to be the outcome? Is nationality a valuable factor in art? Are we to foster it by cooping each nation up in its own box till inbreeding produces a weedy brood of insularities and provincialisms? Or shall we let loose a flood of washy cosmopolitanism that will break down all barriers and produce an average man and an average art all over the world? Science is seeing to it that the first alternative shall not come about. No barriers are proof against Marconi and the flying-man. To guard us against the second, which, to my mind, is far more disastrous, and would indeed take much of the gusto out of life, we must trust to human nature. Half a century ago it seemed as though this deluge might come to pass. Was it not Macaulay who looked forward with a pleased certainty to the extinction of the smaller nationalities of these islands, if not of the whole world, and the final victory of the English language over all others? Happily, as it seems to me, these utilitarian prophecies have not come off, and we live in the midst of a strong and quite spontaneous revival of national feeling. Ireland, Scotland, and Wales, each is asserting herself and laying claim to her own in language, history, institutions, and arts.

> The world is so full of a number of things,
> That I'm sure we should all be as happy as kings,

sings Stevenson's little boy. If we had to add in a footnote that the "things," instead of being delightfully various according to the country in which we found them, were all turned out of the one mould of the Beaux-Arts or the Academy, the happiness of the average king is just about what we should feel! What fun, how stimulating to come across brasswork from Birmingham in Japan! Do you know that fascinating book on a fascinating subject, Pierre Loti's "Um Pélerin d'Angkor"? It is a description of what, ever since I first read Fergusson, has seemed to me one of the most astonishing and mysterious buildings in the world, the great temple of Angkor or Nakhon Wat, hidden away in the jungle of Cambodia. Fergusson himself, not exactly a passionate writer, is stirred to eloquence by the accounts he had heard of it and the photographs he had seen, and an artist in travel and language like Loti is not likely to minimise its romance. The whole book is absorbingly interesting—the journey up the river and through the jungle; the half-ruined temple, inhabited for centuries only by a handful of chanting Buddhist priests; the cloisters, 800 ft. square, their back walls covered from end to end with huge bas-reliefs of mythical battles and dancing girls; the great bats that hang from the vaults; the many hundred yards of sculptured cornice, formed of the gaping jaws of myriads of three-headed snakes.

A Modern Japanese Sanctuary.

But the passage I am going to quote does not deal with Angkor, but with another temple which he saw in the earlier part of his journey at Pnom-Penh, the capital of Cochin China. It runs as follows:—

"To-day, on a solitary prowl as the sun rose at half-past six, I passed through the gate of a courtyard of the palace, a great white-paved courtyard. Alone in the middle of the brilliant empty space a graceful white-and-gold pagoda, its roof bristling with gold points; alone on the sides of the little solitude two tall and surprisingly-pointed golden belfries, based upon rock-work adorned with orchids and rare plants. Not a soul to be seen. But the silence that prevails wears a character of its own; a rustling, like a drone, mingles with it, but disturbs it not—a vague, airy music, not immediately to be defined. It is the chiming of the little silvery bells that hang from every point of the belfries and roof; the lightest breath sets them faintly ringing.

"This pagoda is quite new; it blinds you with the whiteness of its marbles and the sparkle of its gold. The window-heads are of gold filigree, clear-cut like jewel-work on the snowy background of the wall, and topped with pointed spirelets. Its roofs, covered with gilded tiles, have horns at every angle—long, long horns that bend downwards, curve up again, threaten in every direction! Compared with these horns, those of the Chinese pagodas would look quite rudimentary, barely protruding. Many giant bulls, you would say, must have been despoiled to ornament this strange temple. The various peoples of the yellow race have been possessed for ages with this idea of horned roofs for their religious buildings, but the Cambodians lead them all in extravagance.

"Steps drawing near, heavy steps. Ah, three elephants! Without noticing me they cross the court. Full of purpose they seem, and of business, like people who know what they are about. The sound of their tramp and of the bells on their collars breaks for a minute the æolian chime that falls so gently from above, and then, as soon as they have passed, again the musical silence. It is adorable here in the semi-cool purity of the morning.

"The open doors of the pagoda invite me to enter. The ceiling and the walls are all glistening with too brilliant gold, and my steps echo on the brand-new sheets of silver with which it is paved all over. So even now, in our own age, there are still countries imbued with the idea of building such sanctuaries as this!"

Now, can you conceive, or, having conceived, can you welcome a cosmopolitanism which would overspread these countries with bastard European buildings, and turn their designers and craftsmen into hangers-on of the École des Beaux-Arts? Yet under present tendencies it is a very real and imminent danger.

The Problem of Delhi.

Of all problems connected wth nationality it is hard to imagine one more baffling than that of the new city of Delhi. Is it capable of an ideal solution? Probably not. The conditions fight against it. The traditions of the two races are too radically different, the form of administration, the government of a conquered nation by migratory alien officials, is contrary to the spirit of continuity and goodwill essential to any co-operative form of art. Add to this the usual conflict between the stateliness of a great capital and the outcry of modern commerce for convenience at any price, the utterly different angles from which all questions will be faced by designers and workmen, the Office of Works' attitude adopted towards all buildings by the Imperial authorities. No European, one must remember, goes to India just because he is an artist and sees there an opportunity for his life-work. Such artists as may from time to time be found there are mere birds of passage, on the look out for artistic "copy," studies of intense light, vivid colour, native costumes, and the like. Those who make their life there are soldiers or men who care about problems of administration, roadmaking, justice, questions of conflicting religions, famines, bridges. There is an infinite deal to do, too few men and too little time to do it. Moreover the type of mind which grapples gladly with work of that kind is one to which artistic questions make little appeal, so that when you have got your architects out and set them to work they will find the surroundings far from sympathetic. Are they to work in a European manner, or a native, or a compromise? The questions have been raised, and, in the absence of any details of the final scheme beyond the ground plan, we may still discuss them. If the first, they must give up the hope of enthusiastic help from their

workmen, and resign themselves to the uncongenial task of imposing their own ideas from above. The second alternative—a Mahometan, Jain, or Dravidian style adapted to the complexities of modern planning by English architects—may be abandoned after one shuddering glance. Conceive a whole city of Brighton Pavilions! One can, however, imagine, as a sort of compromise, a city of pillared porches and verandahs laid out, as to its main lines and masses and structure, in accordance with the published plan, but with all details of marble, stone, cement, or plaster left to the native workmen; and if there is any remnant of the old skill and sense of style left, one can imagine this finally shaping into something sumptuous and suited to the climate and the light. If fertility in conception can ensure success, Mr. Lutyens should succeed. But there are limits to human optimism when one pictures all the struggles to be gone through between idea and realisation, architecture and officialism; and if he does succeed, I declare he will deserve deification, with a special sect devoted to his cult, like John Nicholson after the Mutiny.

I am not advocating any hide-bound conservatism in regard to nationality in art. The nationality that requires to be cosseted and guarded from the sight or touch of any other nationality is probably not worth keeping. I do not curse the Renaissance, the greatest remover of national artistic landmarks that the world has known till the age of science; for free intercourse in ideas adds a further ripening and fortifying to a mature and strong nature. Stagnation is death, and intercourse is life, but surely highway robbery is a morbid form of intercourse. "I take my good things when I find them," said Molière. Yes, but he transformed them into his own before he gave them to the world. Let us study the art of France, of Italy, of Japan if you will, but only on condition that whatever we take from them we transmute in our own crucible. A very odd passage in "Paradise Lost" thus describes the Tower of Babel:—

> God . . . in derision sets
> Upon their tongues a various spirit, to raze
> Quite out the native language, and instead
> To sow a jangling noise of words unknown.
> Forthw th a hideous gabble rises loud
> Among the builders each to other calls
> Not understood, till hoarse, and all in rage
> As mocked they storm: great laughter was in heaven.
> And looking down, to see the hubbub strange
> And hear the din: thus was the building left
> Ridiculous, and the work Confusion named.

Well, the bequest of that Confusion to posterity has been, amongst other things, the temples of Karnak, the Parthenon, and Chartres Cathedral, perfectly different and differently perfect. The bequest of the Unanimity that preceded it was a misbegotten tower that failed even of its silly object. Which will you choose?"

Professor Lethaby,

in moving a vote of thanks to the author, said he agreed so wholly with Mr. Fletcher and his views were so convincing that nothing was left to add. The changes and reactions they went through made it a frightfully difficult matter. Their little enthusiasms used to last fifty, twenty, or ten years, but now they went through hope and disillusion in two or three years. He did not know what was to be done except, as Mr. Fletcher had pointed out, to absorb everything they could and still try to be themselves. The direct theft of mere details from other countries was, of course, very thin, and the rush which there was to copy fourth and fifth rate degenerate Paris things was very trying. It was so false in policy because we could never reach just what they who were French could do with superbness. He was looking at some illustrations in the *Builder* a few weeks ago of a Frenchman's design for an actor's house or something of the kind. In its debased, luxurious order it was superb. It was perfect of its kind; but think of them in this country running after that when they knew they could not get there, and trying to be fourth-rate French; it was certainly disturbing.

Mr. Halsey Ricardo,

in seconding the motion, complimented the author on a humour not always to be found in the papers of architects. There was so little that one could disagree with in the paper that he was reduced to cavilling at one or two of the author's remarks. Mr. Fletcher, in a light-hearted way, proposed that they should give up rules, but it was worth remembering that rules were the synthesis of past wisdom, and formed a kind of fence defining the area of what was known up to the present day. Any man who could do anything in the way of creation "fetched up" against that fence in some direction and jumped over it or burst through, and then the area was by so much enlarged, and the rules had to be readjusted to take in the additional area, and they called it progress or advancement. But it was rather humiliating to think that with all this advancement they were yet doubtful where they were. Certainly they had changed, but it did not follow that they were any forrarder. A most instructing and humiliating exercise was to walk down the long corridor in the British Museum where the Egyptian statues were. They began at the south end with the Roman Egyptian figures of possibly A.D., and then with every step they took they shed a century of years, and as they went the finer and finer the work was until they got to the unapproachable masterpieces, and by that time they were at 7000 B.C. Then Mr. Fletcher passed by the question of nationality, and said they all knew what it was, but what they meant by nationality was a very complicated story. They thought of themselves as having been overcome by the Normans in the eleventh century, and as having been profoundly influenced by them in every way, but it was curious how, as a rule, conquered nations were the top dogs in the end in architecture. It was only about 150 years after the Normans had vanquished them that they proceeded to rise to the surface, and in Henry II.'s time, although they were virtually the same as the Normans, yet they were doing their architecture with a distinct difference to the French. The suggestion was made that climate had something to do with it, but there was no material difference in the climate and soil of Picardy and Wiltshire to account for the immense difference between Amiens and Salisbury Cathedrals. Then one did not understand why in national art some of the arts of some nations were unproductive. He did not accept the statement that Latin and Teuton meant Classic and Romantic, and that if they were Classic they could not be Romantic; but it was odd that in Egypt they had a people whose art they would have thought would have captured the world, in a sense. The fellaheen's kindness towards living things was so striking; they had the power of being able to play with the forms of animals; they could put a cat's head on the body of a man perfectly easily. No one else had done it except the Japanese, but their art flowed close along the Nile and remained there. If they took the civilisation of the Chaldeans, there they had a brutal people, who, as regarded their intercourse with animals and the life around them took an alien view. They were proud of the horse because it was fine for war, and they sculptured horses absolutely perfectly, but as regarded animals generally they looked on them as food. But yet these people were poets, as they had the Book of Job to show; they were astronomers and alchemists and physicians and mathematical theorists, and their art seemed to be absolutely indestructible. The Medes, the Persians, the Macedonians, the Romans, and the Saracens conquered them, but they always came to the top, and to-day in the South of Spain we see their influence very markedly in their pottery. The Byzantines drew on the Chaldeans, too. It was the same with the Greeks—Greek nationality had got diffused, but it was unconquerable. All that they called Classic architecture was really Greek. The Romans were great builders in a wide and big sense; they built roads and viaducts and baths and the Colosseum, but they did it all in the rough, in concrete, and in block. When it came to be finished the haberdashery, so to speak, was supplied by the Greeks. He doubted if there was any statue or piece of masonry work in Rome that was done by a Roman. It was done by the Greeks brought into Rome. Then they came to the Renaissance, and the curious irony of that was that the artists who called themselves Roman were Northmen. They came from Etruria and Lombardy, and were not really Romans. They came down and saw the work, and they fastened not upon the architecture of the Romans, but upon its decoration, and that was really Greek art. National art, unless they meant something like folk songs and ballads, was a very complicated story, and it was a curious thing why some nations could prevail and others, like the Celts, could not get on at all. As regarded the probable treatment of Delhi, they must remember that in the past what the Greeks and the Romans did was to plant their temples and fora, and so on, in their own forms in strange lands, and to reproduce their own life on foreign shores. The only case that he remembered where a possible compromise was made was in Sicily, where in Palermo they got an original Greek civilisation, and on that was put the Saracen, and on top of that came the Northmen. They got these three working together side by side and mingling, and it was the one case he knew of which might be called a success.

Mr. C. F. A. Voysey

said he did not think they sufficiently recognised the difference between what had arisen by human effort and what was natural or Divine. When they were unable to appreciate nationality it was because they had become so absolutely atheistical that they saw nothing in the world but mankind and man's work. They could only get back to an appreciation of nationality if they recognised that Providence had given them a climate and made them an island, and given them certain materials of certain size. Stone, although called stone all the world over, varied very much according to where it was quarried, and that variation in the quarrying of stone had had a very definite and distinct effect upon the architecture of nations. Where they had a small stone they naturally built with arches, and where they had big stone they were more likely to build with lintels, and so on. It seemed to him, however, that they quite ignored national conditions, and this habitual indifference had destroyed their sense of nationality. Until they got back to more reverence for what was natural they would get little revival of national character. They had forgotten their environment; they had travelled so much, and had seen such lovely things abroad, but it was silly to suppose they could do as Frenchmen, Chinese, or Egyptians did. They had not their ways of thought or materials. He would like to see a little more attention to immediate conditions and less to foreign work. They might, of course, absorb all they could for the purpose of seeing what the possibilities and limitations of materials were. What they saw was their own, but what they sketched they stole. Stevenson's remark that "technique is art" was a ridiculous falsehood, because it was exactly what it was not. It was as bad as saying that language was thought. He only wished they could get away from the modern tendency to collectivism, for then they would get a little more individuality. With an individuality feeling its own environment and appreciating its own God-given conditions they might get a national style, but so long as they were collectivists, and went by fashion and believed in Mr. Blomfield's idea of scholarship, they would get no living art at all.

Mr. M. Webb

said the paper was one to make them think, but he absolutely and profoundly disagreed with a great deal that Mr. Lethaby and Mr. Voysey had said, whilst he was not sure that Mr. Fletcher quite believed all he had said, because in the end he had to admit that he had to take the good things where he found them, but that he transformed them into himself before he gave them to the world. That seemed to him to be the whole point. They might have seen the other day that a famous Italian masterpiece was lost from a chapel outside Florence, and the next they heard of it was that it turned up in the lost luggage office at Charing Cross. Well, everything came to Charing Cross sooner or later; and they all lived close to that point, and hence they had the benefit of seeing the greatest artists and musicians, and if they were to learn nothing from them they must be a poor lot. In architecture, of course, it was a little different, because it did not come to them, and they had to travel to see it, but it seemed to him the more they travelled the better. It appeared to him that their job was to learn from everybody. It all came back to the point that they must take their good things where they found them, and put as much of themselves into them as possible, or, if they liked, put their national feeling into it.

Mr. W. E. Newton,
in a humorous speech, expressed his feeling that some of the remarks were dangerous to the students in the School. When Mr. Voysey said that to sketch was to steal, was that what they wished the students to feel? Then, again, how did Mr. Voysey draw a distinction between the works which could be ascribed to the Almighty. Was not He as much responsible for the rolled steel joist as for the stone from the quarry? He thought that the whole point of the Beaux-Arts question, from the educative point of view, was not that they wanted their students to attempt to copy any type of design, but that they wished them to adopt the method of education of the Beaux-Arts, which had become systematised, and had, at all events, the advantage of tradition. They might be wrong in relying entirely, or even largely, on other people's types of design, but for the method of education for students he thought it might be very helpful to copy a systematised and traditional method of educating.

The President
said the paper was full of fine thought finely expressed. He was rather interested to see in his opening note the use of the word "art." He used to object strongly to people using the word, but hoped he was getting wider-minded. He did think, however, when they were looking at national art they generally found it was most healthy where it was least talked about. He had no doubt in his own mind that as students they had to study the art of all the countries they could; but there were two ways of doing so. The first way was to obtain an insight into the principles of art and the second way was to obtain an insight into the people, as historians had to do in the writing of history. Of course, they were concerned with the first, the principles of art, and until they had mastered the principles they were useless and helpless. After all, it had been observed that at the top all art was not only comparable but one. In this question of nationality in art they were, as it were, playing round a cone, and as nations they might be on opposite sides of the cone, but the nearer to the top of the cone they got art was one. When they looked at the art of any nation, whether Greek or Gothic, it was the selfsame spirit when it came to the top. Of course, while they were learning the principles they were open to disillusion and disappointment, and to a sense of complete failure; but that was one of the things they grew out of. He thought the discussion that night showed that they must learn the rules and stick to them until they got above them.

The vote of thanks was heartily agreed to.

Mr. Fletcher
briefly replied, and remarked that the audience was a terrifying one, for they were so capable of putting their fingers on the weak spots. He slurred over the definition of nationality, because he did not know what it was. He had not set out to fight a battle, but simply to try and find out what he thought about nationality in art, and if everyone tried to find out what they also thought they might get something out of it.

BIRMINGHAM BLUE COAT SCHOOL.

THE architects of Birmingham to the number of twenty-three have been wrestling over the problem set by the Governors of the Blue Coat School—viz., the provision of a new building on a site at Harborne, to provide accommodation for the 180 boys and ninety girls at present housed in the old building facing on to St. Philip's Churchyard, in the centre of the city.

The assessor, Mr. G. H. Hunt, of London, acting in collaboration with Mr. C. E. Bateman, of Birmingham, the Hon. Consulting Architect to the Governors, first selected three designs to compete in a final competition, and finally placed first the plans of Mr. J. L. Ball, of Paradise-street, Birmingham. The others selected were by Messrs. Garratt & Simister and Mr. Marcus O. Type.

Before proceeding to a discussion of the designs, which are illustrated in this number, there are one or two points in the conditions which appear to us deserving of comment. Doubtless upon the recommendation of the assessors the wrestle was to be in two bouts, and three designs were to be selected from a preliminary competition to compete in a final. Why two architects of experience should recommend such a course in a competition in which the expenditure was only to be about £50,000 passes our comprehension.

It may be desirable and justifiable where a building is of great magnitude, but in a work of this size it appears entirely unnecessary. Some justification might be pleaded if line drawings of plans only were required in the first round, but in the present case we find asked for plans of each floor and roof to $\frac{1}{8}$ scale, sufficient sections and elevations to $\frac{1}{16}$ scale, and a detail to $\frac{1}{4}$ scale.

The iniquity of asking for sections and elevations to a different scale from the plans speaks for itself. Square block printing was insisted upon; probably the most tiresome and tedious of any kind, even if one is accustomed to it, especially to a small scale, and additionally tiresome to a draughtsman in the habit of using another type.

Apart from the general schedule of accommodation there are few specific directions, and no general statement of what the promoters have in mind, such as would be given to an architect who was taking instructions from a client—a course, we are aware, which, alas, is too rarely adopted, but which would be of great assistance generally to architects in competition.

Of specific directions we find the following in the conditions for the first round:—

1. Girls' side should be at the Harborne-hill end of the site.

2. Separation of girls and boys, except in the dining and assembly halls, to be strictly observed.

3. A covered way for girls from the hostel to the school block is to be provided.

Replies to queries elicited that (*a*) the assembly-room is to be placed on the ground floor between the hostel and the school, in easy communication with both and with the dining-room; (*b*) the entrance and the main frontage are to be on Somerset-road; (*c*) a completely enclosed quadrangular plan is not desired.

In the second round further instructions, marked extremely important, were to the effect that dormitories were to have windows on both sides, and that the building was not to be more than three stories in height.

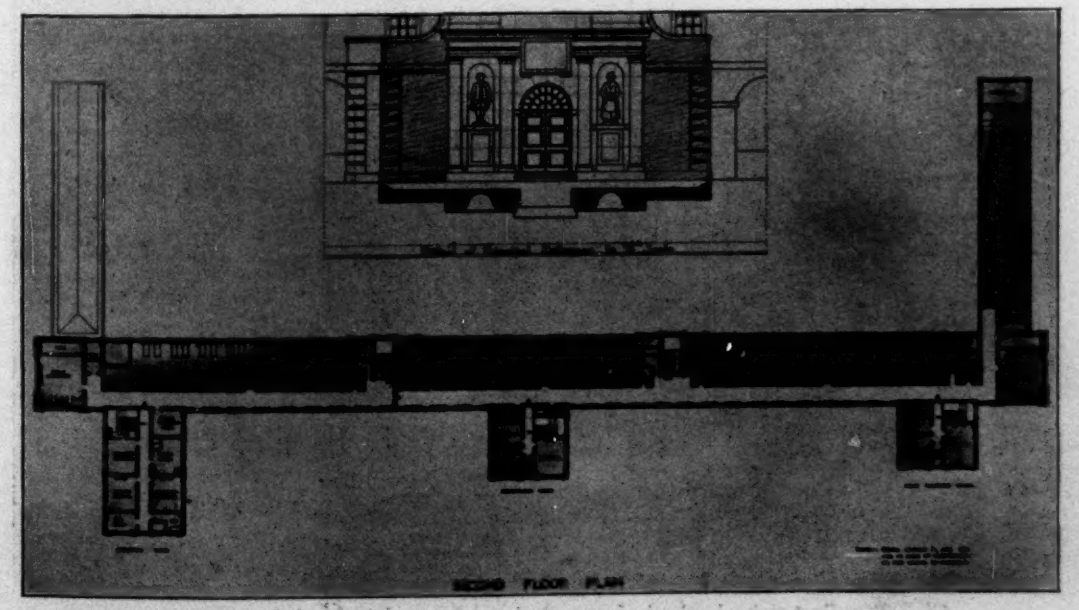
In the schedule the accommodation was set out in blocks as follows:—

No. 1. Hostel and infirmary.
No. 2. School block.
No. 3. Bath and engineering block.
No. 4. Isolation block.

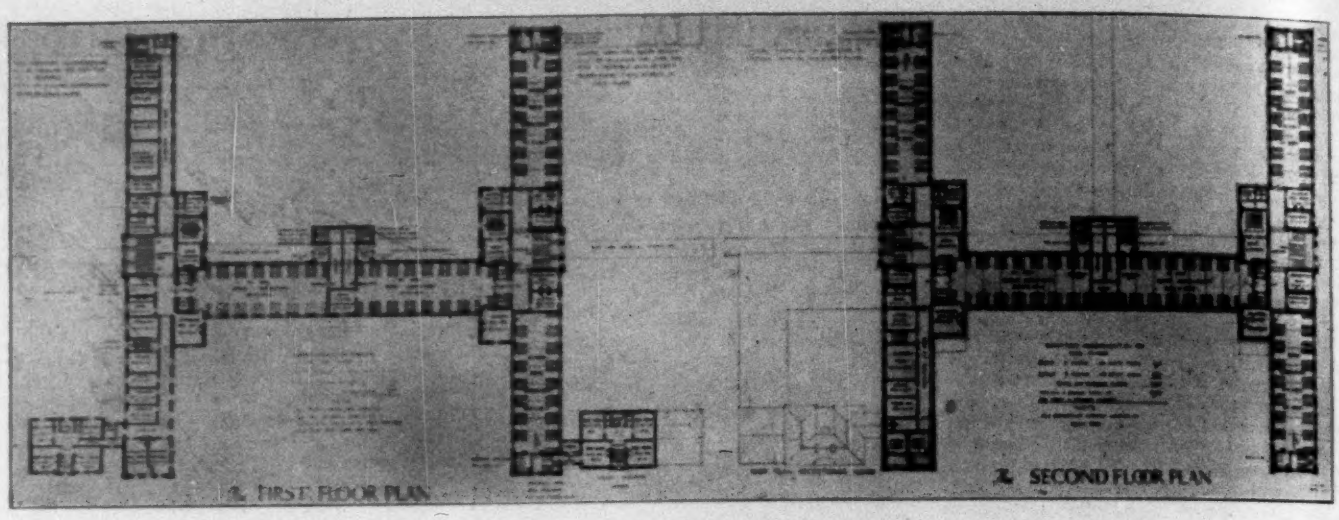
The first point which strikes one in the design placed first is the lay-out of the site, which is level for some distance from the Somerset-road to the north-east and then falls away very quickly. Mr. Ball has placed the long axis of his building, which is a very long one—approximately 500 ft.—at right angles to Somerset-road, at once transgressing the express condition that the main frontage is to be to Somerset-road. Had the building as planned been placed upon the site in accordance with conditions the aspect of the majority of the rooms would have been north-east, and one cannot help feeling the author planned his building in the first place without reference to aspect. When he realised that he had to choose between two evils—a wrong aspect or breaking the conditions—he chose the latter. One of the results of placing the building this way is that it runs out on to sloping land, and the whole of the ground-floor level of the kitchen block would average some 5 ft. or 6 ft. above the present surface level. The infirmary, which is supposed to be connected to the kitchen block by a covered way, is planned still further down the slope, and there is a difference in the floor levels of the two blocks of about 15 ft. So there would be some difficulty in providing a convenient covered way, and more still in conveying cooked food from the one to the other. The planning of the kitchen and engineering blocks practically in the middle of the site as far removed from either road as possible does not strike us as particularly happy, and we should be interested to know how the assessors reconciled themselves to it in the light of one of their conditions—that these buildings were to be near the road. A long length of macadam road would be needed for approach to them, and coals, refuse, and every form of cartage would have to pass along the main frontage.

In Messrs. Garratt & Simister's design this point has been satisfactorily met by placing these buildings near to Somerset-road. The arrangement upon the site violates also the condition that the girls' side should be at the Harborne-hill end of the site.

The general disposition of the plan is extremely simple, one might almost say elementary. As will be seen from our illustration, one long corridor runs from south-west to north-east; this gives access to the various recreation-rooms, libraries, museum, cloaks and changing rooms on the ground floor, the boys occupying



New Blue Coat School, Birmingham: Selected Design.
By Mr. J. L. Ball.



New Blue Coat School, Birmingham: Design submitted in Final Competition.

By Messrs. Garratt & Simister.

the south-west end and the girls the north-east. Close to the latter is the kitchen block.

The assembly-hall occupies a position at right angles to and midway along this corridor, and the children, both boys and girls, have apparently to pass through it to get to the school, if they are to go under cover. In the conditions it is suggested that the girls at any rate must be provided with a covered way. The school is planned at right angles to and at a short distance from the hall.

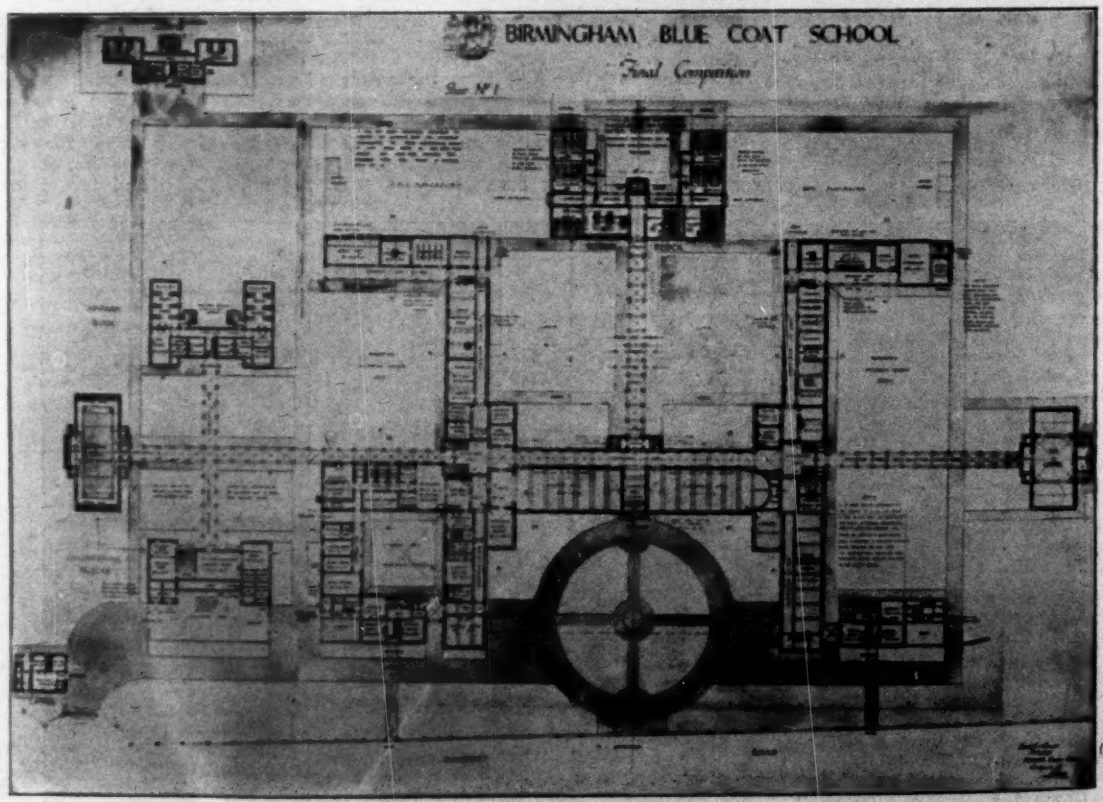
The dining-room is grouped in conjunction with the kitchen block. In the conditions stress is laid upon the fact that the boys and girls do a great deal of the housework of the building themselves. In view of the further condition that "the separation of boys and girls, except in the dining-hall and assembly-hall, is to be strictly observed" it does not appear that Mr. Ball has taken any steps to secure a separate approach for the boys to the kitchen, where some of their duties would have to be performed. To reach this department they would have to traverse the girls' corridor, passing on their way the latter's recreation and changing rooms.

In both the other plans very careful consideration appears to have been given to this point. The ground plan generally is singularly devoid of any niceties of architectural treatment; the main entrance for the Governors and visitors is through a passage 5 ft. wide, which, instead of being axial with the assembly-hall, meets the main corridor at right angles opposite to the door of the boys' recreation-room. There appears almost a studied attempt to achieve irregularity.

Of necessity in a plan for a building of this type, where a large number have to be provided with sleeping accommodation, the upper floor plans become very largely a determining factor in a design. In Mr. Ball's plan there are nine dormitories, each accommodating thirty; 65 ft. per head was required, and the majority of them are 97 ft. long by 20 ft. wide. Five of them occupy the first floor and four the second. Three on each floor are over the main rooms on the long axis of the building, while two on the first floor, and one on the second, project at right angles at the extreme ends. In Mr. Ball's first design his building was planned four stories in height, so that he was able to get three dormitories on three floors along the main axis. It seems evident that, although not expressly mentioned in the original conditions, the assessors never expected more than three stories, and in their supplementary conditions they definitely say so. This seems to have placed Mr. Ball in a quandary, as he had nothing on the ground floor ready to receive the dormitories displaced from the third floor, but he got over this trouble by the make-shift device of utilising the space under as covered playsheds, open on both sides, about as draughty and uncomfortable a place to play in on a rainy day as could be well conceived.

Mr. Ball really seems to have revelled in breaking away not only from conditions, but also from traditions; in his first design the whole of his nine dormitories are lighted from one side only, and not even borrowed lights are shown into the corridor which runs alongside them. He provides his school class-rooms with through ventilation, but does not appear to have considered it necessary for his dormitories. To meet the new condition that dormitories are to have windows on both sides he provides borrowed lights into the corridors. It is interesting to note that the end of the wing dormitories is no less than 370 ft. from the nearest ordinary staircase, and that there are no emergency stairs at the ends of these wings, and those from the middle ones are down the main stairs of the secretary's and head master's houses. Are there no fire regulations in Birmingham?

One cannot pass these house without some comment. The accommodation required in each was two sitting-rooms, kitchen, etc., and four bedrooms, and as they form an important feature in the main front of Mr. Ball's design, need to be carried to the full height of the main block for architectural effect; consequently in his first plans they rise to a height of rather



New Blue Coat School, Birmingham: Design submitted in Final Competition.

By Messrs. Garratt & Simister.

more than 50 ft., and have one upstairs sitting-room and no fewer than seven bedrooms. Even as amended they are still unreasonable, and have far more accommodation than is required, and rooms with an area of about 150 ft., 11 ft. to 12 ft. high.

As economy was an important consideration it is difficult to see how the author or the assessors justify such an extravagance.

Space will not permit us to dwell upon the many points which are open to criticism in this design. Apart from the main block, the infirmary block is certainly open to criticism, both on the score of planning and cost. Mr. Type has a particularly good example of a well-arranged and economical infirmary, well placed in relation to the main building.

In considering the two other designs in the final, one is at once struck by the evident pains which have been taken to achieve the separation of the boys and girls. Ways are provided for the boys to reach the kitchens, the dining-room, and the hall without passing through the corridor devoted to the girls' quarters, but in both of them the assembly-hall is rather far from the school block; each, however, provides a covered way approach. The two plans are very similar in lay-out, and this very largely, we should think, arises from the condition that the main front was to be in Somerset-road.

The arrangement of the recreation-rooms on Mr. Type's plan with a south aspect is particularly good; whereas Messrs. Garratt & Simister score in the placing of their kitchen block so conveniently near the road. Another good feature in their design is the placing of the board-room, which is to be used as the Secretary's office, in close communication with his house, and both in close communication with the administrative block. The careful consideration which has been paid to matters of detail is obvious to the most casual observer, and is particularly noticeable in the upper-floor plans, in which the adequate provision of staircases and emergency exits is in striking contrast to the winner's. We have no hesitation in affirming that either plan is a far abler solution of the problem set than that of Mr. Ball, which, owing to its manifest imperfections, apart from its violation of the conditions, should never have been in the final.

The costs as estimated by competitors all at the same price per foot cube were as follows:—Messrs. Garratt & Simister, £54,000; Mr. J. L. Ball, £52,000; Mr. Marcus O. Type, £46,000.

We admire Mr. Ball's bravery and congratulate him upon his good fortune. He is certainly brave, because he has transgressed most of the important conditions of competition, and in his plans has flown in the face of tradition with regard to a number of points; but, bravest of all, he has served up a set of plans so imperfectly considered that their defects must be apparent to the most elementary of his competitors; and we congratulate him upon his good fortune in finding assessors with so little regard for their obligations to other competitors that they were willing to submit to his violation of the conditions. An assessor has much cause to remember the injunction "Do unto others as you would be done by"; he may be a competitor to-morrow. Both of the assessors in the present instance are Fellows of the Institute, and the Institute publishes "Regulations for Competitions," from which we will quote an extract:—

"The duties of an assessor are as follows:—

(*d*) To examine all the designs submitted by competitors and to determine whether they conform to the conditions, and to exclude any which do not.

(*e*) To report to the promoters on the designs not so excluded, and to award the premiums in strict adherence to the conditions."

Can the assessors claim they have performed their duties in conformity with these conditions in the present instance?

WAREHOUSE, DORSET-STREET, E.C.

A book warehouse has been constructed recently in Dorset-street, Salisbury-square, E.C., from the designs of Mr. William C. Waymouth, F.R.I.B.A., Gwydir-chambers, High Holborn, W.C. The general contractors are Messrs. Walter Lawrence & Son, Finsbury-circus, E.C., and the steelwork for the roof, etc., is by Messrs. Homan & Rodgers, the Vauxhall Steel Wharf. The lifts are by Messrs. Redway's Safety Lift Company, Bush-lane, E.C., and the Crittall Manufacturing Company, Ltd., Braintree, are responsible for the fireproof iron sliding doors, the metal skylights, and other fittings.

COMPETITION NEWS.

It must be understood that the following paragraphs are printed as news, and not as advertisements; and that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

The list of current Competitions is printed on page 530.

Public Art Gallery and Museum, Belfast.

SUMMARY OF CONDITIONS OF COMPETITION: MR. JOHN J. BURNET, A.R.S.A., LL.D., ASSESSOR.

PREMIUMS, £100, £75, and £50. If instructions are not given to proceed within one year the selected architect will be paid 400 guineas; if the buildings are abandoned altogether, a further 200 guineas, making 600 guineas in all. Designs to be submitted on or before March 20, 1914; questions to be sent to the Town Clerk on or before November 14 next.

The designs of competitors in the competition must be illustrated by:—

(1) General plan of site and building, $\frac{1}{16}$ in. scale, coloured to show walks, street, etc.

(2) Plans of all floors, two elevations, two sections = $\frac{1}{4}$-in. scale.

(3) Perspective view.

Drawings to be in black and white with wash of colour over floors. Size of building in perspective not to exceed 20 in. in width.

The Corporation are advised that it is possible to obtain a building suitable for their requirements at a total cost not exceeding £75,000. Any design likely to exceed that figure will be excluded from the competition.

General Remarks.

1. The purpose of the building is to preserve and display articles of various kinds, not only with satisfaction to connoisseurs, but with a taste and artistic refinement likely to awaken the interest of the public generally. As in a sense it is a building of galleries, passages or corridors should be avoided so far as possible, and, where necessary, should—as well as the staircases—be of ample width to permit of exhibits being placed on or in them without interference with their use as a means of circulation. The galleries should be varied in size and in method of lighting, so as to afford opportunities for the exhibition of varieties of objects.

2. The entrance hall should be spacious, offering ample floorage for the temporary arrangement of cloakroom accommodation for special functions.

3. The main staircase, or staircases, should not be too large.

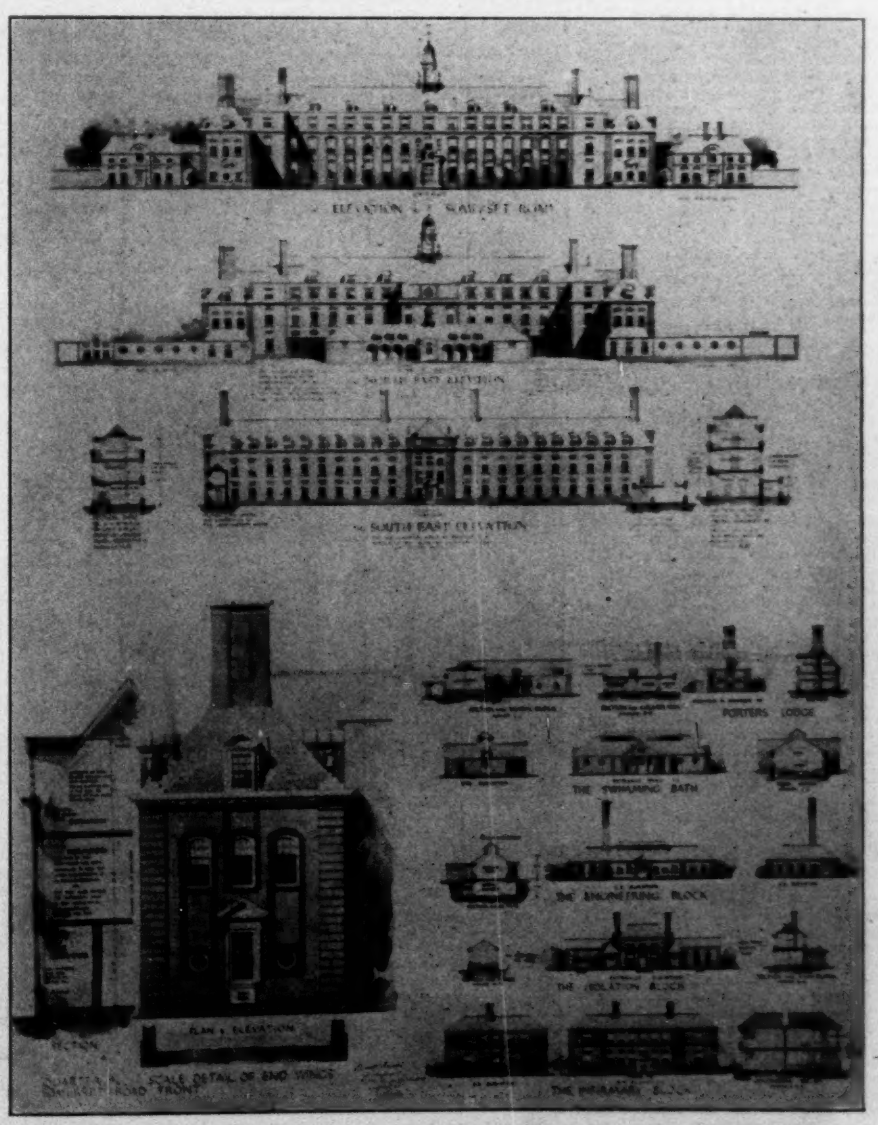
4. A service staircase should be provided from basement to top floor.

5. A quick-running elevator (near the public entrance), capable of holding a full-sized Bath-chair, and a goods elevator in a central position are necessary.

6. Entrance for the public should be from the gardens on the north, but independent public access, with the necessary conveniences, must be provided from Stranmillis-road, on the west, enabling the building to be entered in the evening when the Botanic Gardens Park is shut, and affording free access to the Administration, to the Loans Gallery, and to the Lecture Theatre when the galleries are closed in whole or in part.

7. In order that the interior may be as adaptable as possible to the varying needs of the Curator, the erection of permanent interior walls and columns should be reduced to the minimum consistent with proper and substantial construction. The exhibition cases will, as a rule, stand free in the rooms and not against the walls, but they may be arranged in the basement and ground floor between the windows, and standing out into the floor, forming "bays" or alcoves.

8. The areas given are merely approximate and are intended to give a general idea of the kind of accommodation required. The top lighting of the picture galleries should be such



New Blue Coat School, Birmingham: Design submitted in Final Competition.

By Messrs. Garratt & Simister.

as to illuminate the walls. The galleries for water-colours, old masters, and prints may have side lights; for sculpture a high side light is suggested.

9. The ready circulation of the public and easy control by a small number of attendants is of importance.

10. Externally the design should be severely simple and dignified, but provision may be made for decorative sculpture that may subsequently be provided by donors.

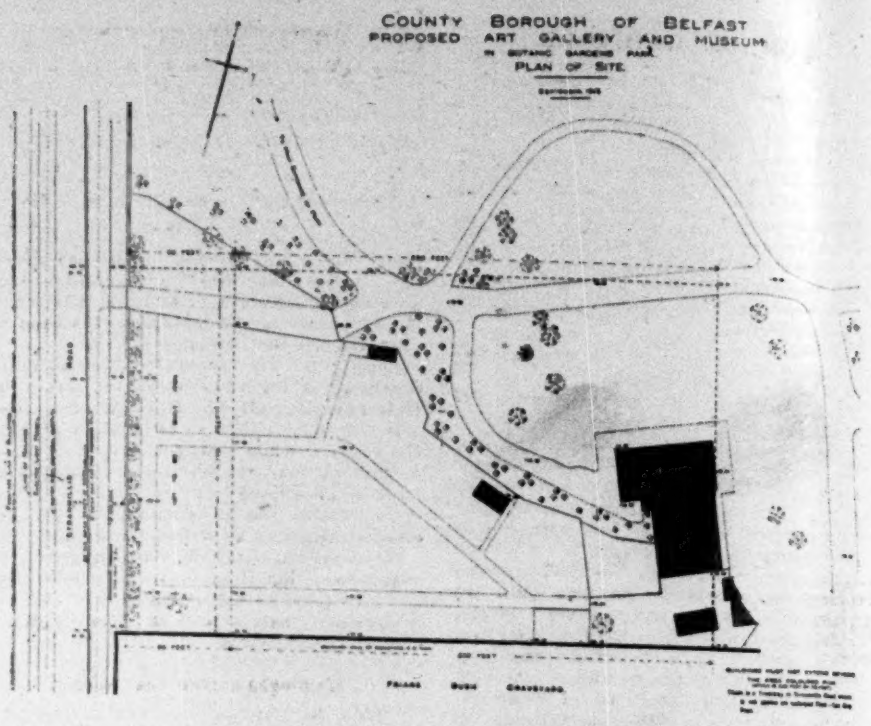
11. Internally the building should be finished in a simple and dignified way, free of ornamental detail likely to compete in interest with the exhibits.

12. Any enclosures or boundary walls towards Stranmillis-road, or any terracing within the gardens, proposed by a competitor must be clearly shown, and in the latter case it would be well that they should come in with the general scheme of walks, etc., in the Botanic Gardens Park.

13. The floor of the basement need not be more than 6 ft. below the surface of the ground, but precautions must be taken to secure absolute dryness. The building must be thoroughly damp and fireproof, and care must be taken to minimise the risks of fire, theft, and other perils. Where timber is used it must be fire-resisting.

14. No residential quarters will be required.

15. The floors of each department of the building should be on one level, so that a truck can be run from any one part to any other; different levels, if any, between departments must be connected by elevators.



ACCOMMODATION FOR NEW MUNICIPAL ART GALLERY AND MUSEUM IN BELFAST.

Administrative and General.	Building when completed to contain.	Suggested Dimensions	Space required at present.	Suggested Position.	Suggested Lighting.
	sq. ft.	ft.	sq. ft.		
Goods receiving and unpacking room—for receiving and unpacking pictures and objects	1,500	—	1,500	Basement	—
Workshops, for use of Museum staff, for preparation of exhibits and general repairs in connection with exhibits	1,200	—	1,200	Basement	North side light
Fumigating chamber—a concrete chamber convenient to workshop, to be used for fumigating objects. Pipe to carry fumes up chimney	240	12 × 20	240	Basement	—
Photographic gallery, laboratory, and dark-room for reagents and photographic purposes	600	—	600	Basement	North side light
Strong-room	280	—	280	Basement	—
Reserve and students' collections in arts antiquities, and natural history, including research students' room	Say— 12,000	—	2,000	Basement	Side light
Refreshment-room, kitchen, etc.	1,000	—	—	Basement	—
Curator's office	280	14 × 20	280	Ground floor	North side light
Strong-room leading off curator's office	98	14 × 7	98	—	—
Staff office	280	14 × 20	280	Ground floor	Side light
Typist's room	196	14 × 14	196	Ground floor	—
Hall (statuary)	1,974	42 × 47	1,974	—	—
Museum Library	350	14 × 25	350	Ground floor	Side light

Exhibition Galleries and Lecture Theatre.	Building when completed to contain.	Suggested Dimensions	Space required at present.	Suggested Position.	Suggested Lighting.
	sq. ft.	ft.	sq. ft.		
Lecture theatre	1,440	32 × 45	—	—	—
Zoology—invertebrates, comprising the lower orders of the animal kingdom	1,120	28 × 40	1,120	Ground floor	North side light
Zoology—vertebrates, comprising the larger animals	1,960	28 × 70	—	Ground floor	North side light
Geology and mineralogy—rocks and fossils	1,960	28 × 70	—	Ground floor	Side light
Botany—plant models, etc.	980	28 × 35	980	Ground floor	Side light
Children's room—exhibits for juveniles	980	28 × 35	980	Ground floor	—
Ethnographical gallery—weapons and implements, domestic utensils, clothing personal ornament, etc.	1,960	28 × 70	1,960	Ground floor	Side light
Egyptian and Peruvian antiquities—mummy coffins, sculptured slabs, etc.	980	28 × 35	—	Ground floor	Side light
Irish antiquities and ethnology—objects appertaining to ancient life in Ireland and those to present-day life	1,960	28 × 70	—	Ground floor	Side light
Belfast-room—objects appertaining to the past and present of Belfast	1,512	28 × 54	1,512	Ground floor	Side light
Spinning wheels and hand looms	1,512	28 × 54	1,512	Ground floor	Side light
				To accommodate two sections of wall-case, back to back, each 11 ft. 6 in. long, 33 in. deep	
Textiles and embroideries	980	28 × 35	—	—	—
Metalwork and woodwork	1,960	28 × 70	1,960	Ground floor	Side light
Pottery, glass, and enamels	980	28 × 35	—	—	—
British oil paintings	1,972	34 × 58	1,972	First floor	Top light
French oil paintings	1,600	40 × 40	—	First floor	Top light
British water-colours	1,600	40 × 40	1,600	First floor	North side light
French water-colours	1,600	40 × 40	—	First floor	North side light
Patterson collection of paintings	1,600	40 × 40	—	First floor	Top light
Old Masters (paintings)	1,600	40 × 40	1,600	First floor	Side or top light
Local artists (paintings)	1,600	40 × 40	—	First floor	Top light
Sculpture (Greek)	1,700	34 × 50	1,700	First floor	—
Prints gallery and swing frames	1,120	28 × 40	—	First floor	Side light
Loans galleries—to be used for loan collections of paintings, etc.	2,482	—	2,482	First floor	Top light
Students' copying-room	800	20 × 40	—	First floor	Top light

16. The rooms for the Curator might, with the Board-room, be near the west entrance, and in any case must be so situated that the closing or temporary cutting-off of all or any of the departments of the Museum does not cut off public access to these rooms.

17. The library should be near the Curator's office, but public access to it should be possible without disturbance to the Curator or his staff.

18. The building is to be lighted by electricity, supplied from the Corporation mains, and plugs are to be provided for vacuum cleaner.

19. Water supply to be laid on throughout the building for fire hydrants. A hot and cold water supply is necessary.

20. The porter's room and public lavatories should be near the entrance, and the staff lavatory (entirely separate and entered by other means) should be near the public lavatories. Independent access should also be provided for the lavatories for women, both for the public and staff.

21. One or more cleaners' closets should be provided on each floor, of ample size to contain the necessary material and plant, and fitted with sinks with hot and cold water supplies.

22. A service court, with service entrance and cartway, should be entered from Stranmillis-road, and so arranged that it does not render that or the north side of the building a back elevation.

23. The unpacking-room, goods elevator, stores, workshops, fumigating chamber, coal stores, and heating-chamber should be entered from the service court.

24. A workmen's lavatory should be provided in the service court.

25. It is desirable that the furnace-room or boiler-house and the coal store should not be beneath the Museum building proper.

Coventry Technical Institute.

Members of the Society of Architects are advised that the conditions of the Coventry Technical Institute Competition are at present unsatisfactory in certain respects, and that efforts are being made to have the conditions amended.

ROMAN COLCHESTER.

Dr. Henry Laver, F.S.A., and Mr. Ernest N. Mason, of the Morant Club, have begun their excavations with the object of ascertaining the nature and extent of the Balkern Gate, the original chief entrance into the Roman city. They have discovered the foundations of the gate, of great size, upon the north side of the contemporary guard-room that was disclosed about sixty years ago. The four distinct gate-ways were, it is conjectured, made for separated vehicular and foot traffic. One of the two chariot-ways and one of the two footways were since blocked up, perhaps in the later time of the withdrawal of the garrison from Colchester to Rome.

Leading Contents.

	PAGE.
THE FUNCTION OF ORNAMENT	505
MR. JOHN BELCHER, R.A.	507
A NEW STYLE OR AN OLD ILLUSION: "AMERICAN STYLE ARCHITECTURE"	507
THE ARCHITECTURAL ASSOCIATION	509
BIRMINGHAM BLUE COAT SCHOOL	513
ARCHITECTURE AND THE STAGE	518
CONSTRUCTION SECTION:—	
MIDDLESEX GUILDHALL, WESTMINSTER	519
TROPICAL BUILDINGS	523
STANDARD REPRESENTATIONS OF MATERIALS IN CROSS-SECTION	523
THE BUILDING TRADE:—	
SOME ASPECTS OF TENDERING.—III.	524
STRIKES AND LOCK-OUTS	524
THE LONDON COUNTY COUNCIL	528
THE SURVEYORS' INSTITUTION	528
THE SOCIETY OF ARCHITECTS: PRESIDENTIAL ADDRESS	529

ILLUSTRATIONS.

Buckingham Palace.

IN our issue of November 1, 1912, we illustrated Sir Aston Webb's design for the new façade of Buckingham Palace, and referred to the past history of the Palace in an article. We now give photographs of the work as executed, which we have been allowed to take by special permission of the Lord Chamberlain, and we think our readers will be interested in some account of one of the most remarkable instances of rapid construction that can be instanced. Even in America, that land of gigantic building enterprise, the refronting of the Palace, carried out under the limitations of time which were necessary, would have been unusual; it is even more so in London, and is a great testimony to the efficiency and completeness with which our best contractors do their work, proving that in enterprise and knowledge of their calling they are second to those of no other country in the world.

The whole of the present work has been carried out by Messrs. Leslie & Co. without competition, and has been under the personal supervision of Mr. Frederic Shingleton, their managing director.

Sir Aston Webb's original suggestion was that the work should be carried out in two years, as the work could be carried on only for three months in each year; but after going into the matter Mr. Shingleton undertook that his firm should carry out the work in thirteen weeks. They had possession of the site given to them on August 5, and the front was completed on October 31, on which date the site was cleared of all plant, offices, etc.

In order to carry out the work in the time it would have been necessary to work night and day at the firm's stoneyard, but to obviate this a stoneyard at Vauxhall was secured and about half the stone was worked at each yard.

One hundred and three thousand cubic feet of stone was delivered from the quarries, weighing over 6,000 tons, and from beginning to end of the work 800 men were employed.

Most elaborate plant and scaffolding was used to enable the work to be carried out in the time. There were six derrick cranes and five electric hoists, and two Waygoods' passenger lifts were also used. Iron joists were fixed from end to end of the building as runners, and attached to these were thirty 1-ton and ten 2-ton Morris' patent endless tackle, and 32,000 Scaffixer blocks were used, supplied by the Patent Rapid Scaffold Tie Company, Ltd.

Since the scaffolding could not be tied to the building in any way, it was necessary to erect double rows of poles with platforms 16 ft. wide, formed of joists 18 ft. long, 6 in. by 4 in. in size, upon which were fixed trams of a 2-ft. gauge, with trolleys, the platforms being asphalted with asphalted felting, supplied by the Limmer Asphalte Paving Company, to protect the men in wet weather.

The hoists were used for taking the stone up to the second floor, and the derrick cranes then came into use for hoisting the stone of the upper portions.

A view of the scaffolding appeared in our issue of October 3, 1913. There are 16 ft. of solid brickwork in the foundations, a large portion of which is of blue Staffordshire bricks.

One portion of the cement used was made of white Portland cement, and the other of white sand and ground Portland stone, so that there should be no stain on the front.

The Portland stone used was supplied by Mr. F. J. Barnes, of Portland; the slating by Messrs. Bingley, Son, & Follit; the electrical installation for lighting up the front at night by Mr. A. Blackmore; and the granitic base was from Messrs. J. Freeman & Co.'s quarries.

The work has been carried out continuously by day and night shifts, the only interval being from midnight Saturday to midnight Sunday, and the shifts have worked day and night on alternate weeks.

Mr. Frederic Shingleton commenced speculative building forty years ago, but subsequently undertook contracting, trading as Leslie & Co. in 1885, and the business was converted into a limited liability company in 1894.

Since then his firm have carried out many large contracts, among which we may mention Park Hospital, the Small Pox Hospitals at Dartford, and the Royal College of Science at South Kensington, while among the work at present in progress may be mentioned the Eleventh Asylum at Epsom, for the London County Council, and the substructure of the New Science Museum at South Kensington, which is being carried out in ferro-concrete.

It is said that Rome was not built in a day, but we can claim that in this century the fronts of a Royal palace can be reconstructed in exactly three months!

Birmingham Blue Coat School.

THESE illustrations are given in connection with an article on the Blue Coat School competition, which will be found on page 513.

Middlesex Guildhall, Westminster.

ON page 519 a description, together with other illustrations of this building, will be found.

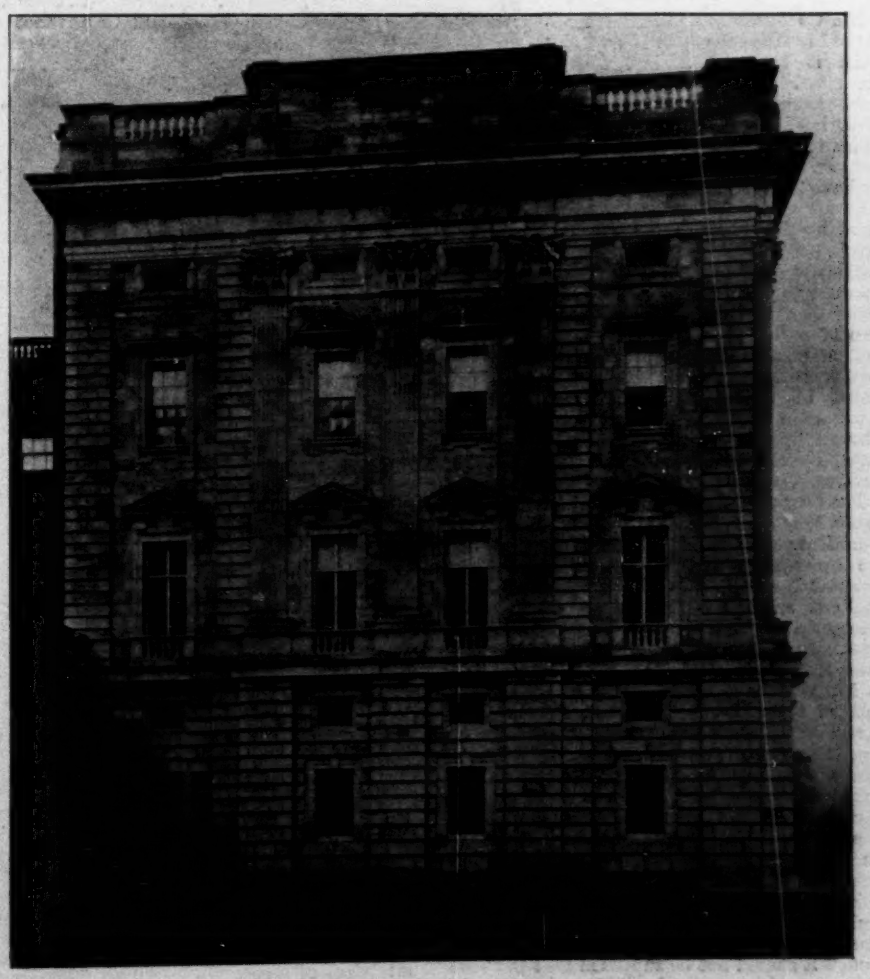
The Extension of University College.

IT is not often that artists pause to sketch buildings in course of erection, yet no more interesting stage occurs in the career of a structure. The lines of scaffolding, cranes, and derricks blend harmoniously; from the vertical element of scaffold poles and ladders we gather an impression of a gigantic carcase in splints; we feel that we are being initiated into the mysteries of some esoteric surgical operation. Mr. Fletcher has shown in his clever sketch a fine contrast between the new works in progress and the older portions of the building already in existence; his drawing gives some idea of the grand scheme of the University which is now rapidly nearing completion. From the cursory inspection we made the other day the additions designed by Professor Simpson mark a continuance of the academical traditions of the English school. He has contrived to carry on the existing building scale, and at the same time has introduced a distinctly modern character into the new work. This, however, we shall deal with at greater length when the buildings are more nearly ready for occupation. The original design for the College was the outcome of a public competition in the 'thirties, for which many eminent men competed. The first premium was gained by Professor Wilkins, who carried out the work in conjunction with Gandy-Deering. The buildings were first opened in 1838 under the name of the London University, which called forth satire from the rhyming pen of Ingoldsby. The work then completed consisted of the façade, with the portico over 400 ft. in length, Wilkins's original intention being to carry on wings and form an open quadrangle. Finally, in 1868 Professor Hayter Lewis, who succeeded the talented Donaldson, was called upon to prepare a design for the extension. This work included the north and south wings, with the circular domed features at the centres. Messrs. Perry & Reed, architects, were responsible for the realisation of Professor Hayter Lewis's design. We cannot praise too highly the scholarship of Professor Simpson, who has evolved such a fine sequel to the existing buildings; but those who remember the delightful open-air Greek theatre at Bradfield College, which he designed, will recognise him as one of the pioneers in favour of academic architecture.

Queens' College and Bridge.

QUEENS' COLLEGE was founded by Margaret of Anjou, Queen of Henry VI., in 1448, and the work begun by her was continued by Elisabeth Woodville, Queen of Edward IV.

The view is of the west side of the cloister court, and shows the timber bridge by which this part of the College is connected to the



Buckingham Palace: East End View.

Sir Aston Webb, C.B., R.A., Architect.

island, on which are servants' houses, lecture-rooms, a fruit garden, and the grove.

The bridge, with a span of 40 ft. over the river, was built in 1749. It was originally constructed solely of timber, but it has since been deemed necessary to supplement this construction by the addition of bolts.

HEDLEY A. MOBBS.

MEETINGS.

FRIDAY, NOVEMBER 14.

University of Manchester.—Professor Beresford Pite on "English Mediæval Architecture"—II. 7 p.m.

MONDAY, NOVEMBER 17.

Royal Institute of British Architects.—Paper by Mr. H. V. Lanchester on "The Wesleyan Hall, Westminster." 8 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "The Renaissance Palaces and Churches of Venice." 5 p.m.

Chadwick Public Lectures (at the Institution of Civil Engineers).—Mr. W. Addington Willis on "House Drainage Law." 8.15 p.m.

Institute of Sanitary Engineers.—Mr. F. W. Cable on "The Sewering of Towns: Some Notes and Criticisms." 8 p.m.

TUESDAY, NOVEMBER 18.

Illuminating Engineering Society.—Meeting at the House of the Royal Society of Arts. 8 p.m.

Chadwick Public Lectures (University of London).—Sir George Newman on "The Place of the Open-Air School in Preventive Medicine." 5 p.m.

University of London (British Museum).—Mr. Kaines Smith on "Art and Humanity." 4.30 p.m.

The Institution of Civil Engineers.—Paper to be further discussed: "The Construction of the 'White Star' Dock and adjoining Quays at Southampton," by Mr. F. E. Wentworth-Sheilds, M.Inst.C.E. 8 p.m.

WEDNESDAY, NOVEMBER 19.

The Society of Architects.—Concert of chamber music. 8 p.m.

Royal Society of Arts.—Opening address by Colonel Sir Thomas H. Holdich, of the 160th Session of the Society. 8 p.m.

THURSDAY, NOVEMBER 20.

Architectural Association.—Annual conversazione. 8 p.m.

Co-Partnership Tenants, Ltd.—Annual dinner at Connaught Rooms, Great Queen-street, W.C. 7.30 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "Greek Architecture." 4.30 p.m.

University of London (Victoria and Albert Museum).—Mr. Kaines Smith on "Beauty and Truth." 3.30 p.m.

ARCHITECTURE AND THE STAGE.

MR. CHESTERTON'S play, "Magic," produced at the Little Theatre, will add to his reputation, while it forms a distinct addition to the plays which cause one to think. Nothing is more interesting than the nature of the borderland between doubt and belief, with which the play is concerned from beginning to end, and, though no dictums are laid down, we have for that very reason a more interesting field for thought. The Duke was admirably acted by Mr. Fred Lewis, and the Stranger's part well filled by Mr. Franklin Dyall; while the character of Patricia Carleon was charmingly rendered by Miss Grace Croft. Altogether it is a play to see by those who take the drama seriously. Both scenery and setting are suitable and pleasing. The curtain-raiser, "Geminæ," deals with a love-story, in which two twin sisters are so much alike that the lover himself is puzzled. Though love is blind, we think its blindness may be overstated, but, though not completely convinced, we were amused and entertained.

The play produced by Mr. P. Michael Faraday at the New Theatre, "The Laughing Husband," a musical comedy in three acts, is adapted from the German of Julius Brammer and Alfred Grunwald, and it no doubt owes much of its qualified success to its adaptor, Mr. Arthur Wimperis, though had he dealt somewhat drastically with Acts I. and II., departing more from the German original and had contrived to introduce Mr. James Blakeley into one or both of them, probably those two acts would have been as good as the third, which is saying a good deal, and the play might very well have been a complete success without any qualification. Mr. Blakeley as Dr. Rosenrot, the lawyer, who, having given up specialising in divorce as so many other lawyers do the same, devotes his whole attention to reconciling people unhappily married, is the life of the last act, which is highly amusing and entertaining from beginning to end. If only for this act and Mr. Blakeley's acting the play should be seen, though it should not be supposed that the other acts are without amusement. Mr. Courtice Pounds, as the retired confectioner, who "backed his jam puffs against any newspaper puffs," sustained his part very well; as did Miss Daisy Irving as his wife, and Miss Mabel Burnege, the wife of a rich publisher, these two ladies requiring the assistance of Dr. Rosenrot in consequence of their escapades. The three acts are very well staged, and show that some of our modern theatres are devoting their attention to this much-neglected art.

CORRESPONDENCE.

"Builders' Societies" and the Training of Master Builders.

SIR,—My attention has been drawn to the article on "Builders' Societies" on p. 431 of the *Builder* for October 24, in which references are made to the courses for builders which have been started in this University, and to the desire of the University for the co-operation of the National Federation of Building Trade Employers and of the Institute of Builders.

The interest which the National Federation has taken in the scheme is very gratifying, and, lest there should be the slightest doubt in the mind of anyone on the subject, let me say at once that the active interest, advice, and support of both the Federation and the Institute will be welcomed.

As I stated at the end of an article in your pages (May 16, 1913):—"If such powerful organisations as these take up seriously this question of higher education in the building industry there can be no doubt about the results."

The Royal Institute of British Architects is devoting a considerable proportion of its energy to the question of architectural education, and schools of architecture have been established in connection with most of the Universities in this country.

The same kind of thing can be done for builders if their leading societies will take up the question, particularly if they bear in mind that when the University courses are started their support will be needed in encouraging the right kind of student to make use of them.

Systematic courses of instruction of University standing for those who are to occupy responsible positions in the building industry will not only be of great service to the students, but will help to raise the standard of education in building technology generally, to increase the prestige of the building industry, and to advance the frontiers of knowledge by means of advanced study and research work. W. S. PURCHON.

The University, Sheffield.

"London Unique": The Bridges.

SIR,—Southwark Bridge having "told its tale," let us hope there will never be another, nor any other westward to Blackfriars, to spoil the prospect of that part of our beautiful river.

Bridges we must have, but superfluity will be wantonly wasteful if persisted in, even after an Act of Parliament has been obtained for the work by the public authority concerned.

It is therefore suggested that, in view of the consideration of the whole matter of metropolitan improvement at a very early date, the rebuilding of Southwark Bridge be deferred, as also other contemplated bridges further west.

The time is just now when the question of traffic improvement must be taken up and considered as a coherent whole, possibly on a fresh basis, and when such piecemeal and detached schemes will be found to be unnecessary.

It is averred they are, and that the £2,000,000 or £3,000,000 of public money held in reserve may be expended to infinitely better purpose.

O. B. I. T.

"A Suggestion."

SIR,—I have taken the *Builder* many years, and I am writing to endorse the suggestion made by "Concrete" in your last issue.

A great many builders and others like myself are much interested in detached and semi-detached houses, exactly of the type described by "Concrete," costing, say, from £400 to £1,500 each to build.

I do not suppose these suggestions are new to you, but if you favourably consider them I think a few hints and occasional plans in your valuable paper would be very interesting and helpful to many of your readers, and would no doubt help to raise the tone and character of this class of house. READER.

[**** Several interesting letters have been unavoidably held over.—ED.]

INTERCOMMUNICATION COLUMN.

Names of Sewerage Contractors Wanted.

We have received the following communication, and shall be glad to send names of sewerage contractors who would like to undertake the work, if they will write to us. We have omitted certain names from the letter and the name of our correspondents:—

SIR,—Can you give us the names of three or four firms likely to undertake a sewerage contract in Africa? It would probably amount to about £100,000. We know Messrs. . . . but there are probably some firms of less importance, but still reliable, who are looking out for this work abroad. If you know of any such firms and would kindly give us their names we should appreciate it. X.

GENERAL NEWS.

Frognal Hall and Priory Lodge, Hampstead.

An appeal has been heard in the Surveyors' Institution by the Referee, Mr. Howard Martin, of Messrs. Thurgood & Martin, surveyors, respecting the amended provisional valuation at £15,000 set upon the Frognal Hall and Priory Lodge Estate by the Inland Revenue Commissioners. The appellants, as owners, Messrs. J. W. & C. R. Flood, of Westbourne-grove, W., auctioneers and surveyors, contend that the total and site values should be placed at £32,000. Mr. R. Ashford Dash, Superintendent Valuer for London (North), stated in his evidence that he was responsible for the £12,000 valuation, and that £15,000 was the utmost value he could justify, as, in his opinion, the demand in Hampstead is now for lesser site values. Mr. B. I'Anson Breach, President of the Auctioneers' and Estate Agents' Institute, said his valuation amounted to £14,812, and that he considered the land is worth £2,500 per acre. Mr. J. H. Shaw appeared for the Commissioners and Mr. E. M. Konstam for the appellants. In his decision the Referee holds that the amended provisional valuation is correct.

Kent County Surveyorship.

Out of fifty-five applicants for the post of County Surveyor in Kent, in succession to Mr. H. P. Maybury, six were selected to interview the Bridges and Roads Committee, and the following two have been selected for the final choice of the County Council on November 19:—Mr. Herbert Turlay Chapman, County Surveyor and Road Engineer to Somerset County Council; Mr. Herbert Wm. Bowen County Surveyor of West Sussex.

Rebuilding Scheme at Nottingham.

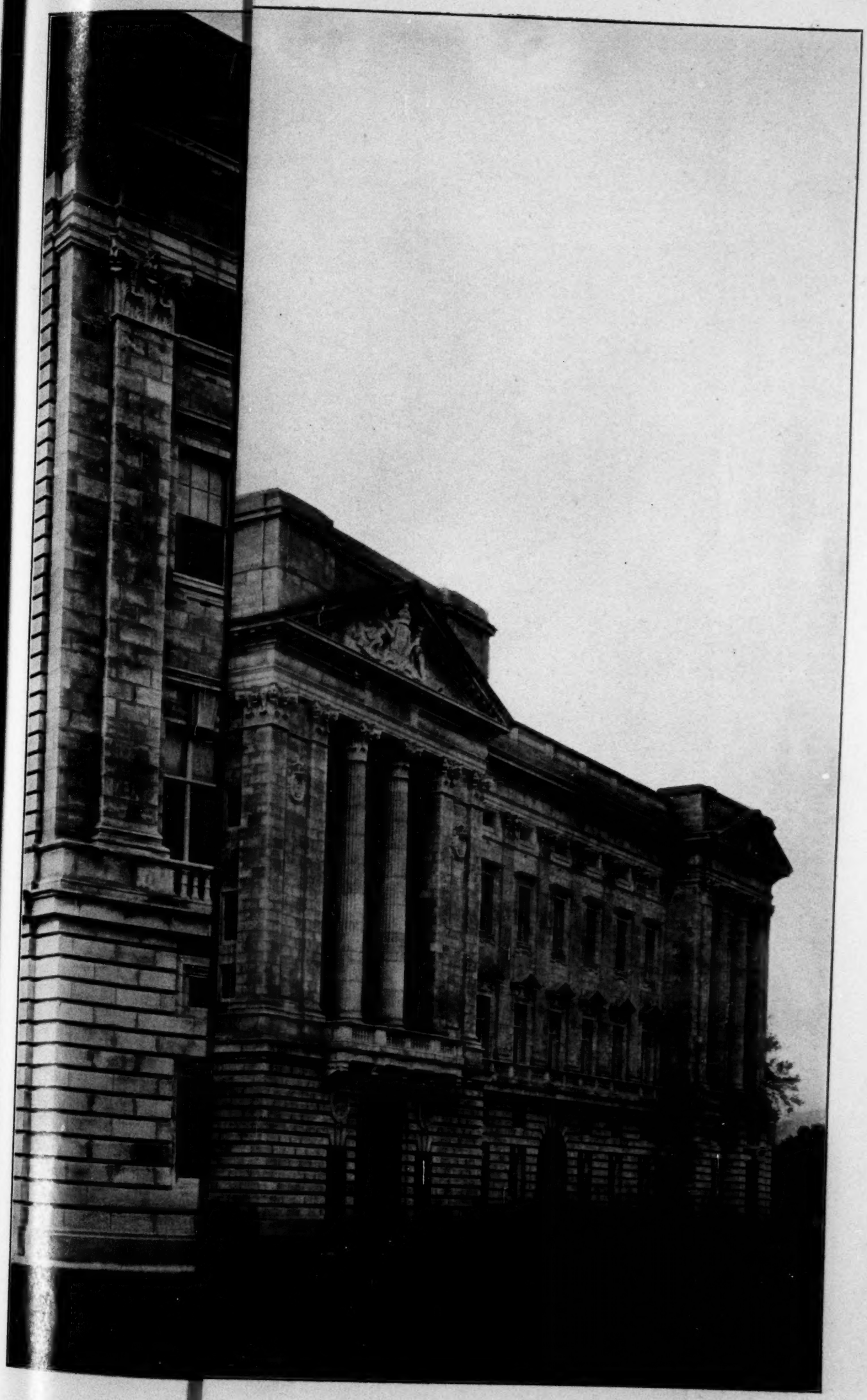
It has been decided by the Nottingham Board of Guardians to erect an administrative centre, central home, and receiving home on the Hartley-road site. Plans have been prepared by Mr. E. R. Sutton, architect, and the estimated cost of the scheme will be £5,350.

FIFTY YEARS AGO.

From the *Builder* of November 14, 1863.

EXTRACT from the notice of a meeting of the Manchester Architectural Association:—"On the Creation of a New Style"; "Detail in its Inherent and Relative Proportions"; "Symbolism"; "Church Architecture of the Present Day: its Position and Requirements"; "Competitions, with a Proposed Plan for Obviating the Evils at Present Resulting Therefrom"; "Colour in Relation to Architectural Decoration"; "A Proposed Plan for Equalising the Various Systems of Measurement Now in Use"; "On the Transfer of Land and the Law of Contracts"; "Stained Glass"; "Concrete," etc., etc.

**** This shows that the same subjects perennially interest us, as will be seen by the notice of the "American Style Architecture" in this issue.—ED.



Martin, Hood & Larkin, 61, Newport St., London, W.C.

INTERCOMMUNICATION COLUMN.

Names of Sewerage Contractors Wanted.

We have received the following communication, and shall be glad to send names of sewerage contractors who would like to undertake the work, if they will write to us. We have omitted certain names from the letter and the name of our correspondents:—

SIR,—Can you give us the names of three or four firms likely to undertake a sewerage contract in Africa? It would probably amount to about £100,000. We know Messrs. . . . but there are probably some firms of less importance, but still reliable, who are looking out for this work abroad. If you know of any such firms and would kindly give us their names we should appreciate it. X.

GENERAL NEWS.

Frognal Hall and Priory Lodge, Hampstead.

An appeal has been heard in the Surveyors' Institution by the Referee, Mr. Howard Martin, of Messrs. Thurgood & Martin, surveyors, respecting the amended provisional valuation at £15,000 set upon the Frognal Hall and Priory Lodge Estate by the Inland Revenue Commissioners. The appellants, as owners, Messrs. J. W. & C. R. Flood, of Westbourne-grove, W., auctioneers and surveyors, contend that the total and site values should be placed at £32,000. Mr. R. Ashford Dash, Superintendent Valuer for London (North), stated in his evidence that he was responsible for the £12,000 valuation, and that £15,000 was the utmost value he could justify, as, in his opinion, the demand in Hampstead is now for lesser site values. Mr. B. I'Anson Breach, President of the Auctioneers' and Estate Agents' Institute, said his valuation amounted to £14,812, and that he considered the land is worth £2,500 per acre. Mr. J. H. Shaw appeared for the Commissioners and Mr. E. M. Konstam for the appellants. In his decision the Referee holds that the amended provisional valuation is correct.

Kent County Surveyorship.

Out of fifty-five applicants for the post of County Surveyor in Kent, in succession to Mr. H. P. Maybury, six were selected to interview the Bridges and Roads Committee, and the following two have been selected for the final choice of the County Council on November 19:—Mr. Herbert Turlay Chapman, County Surveyor and Road Engineer to Somerset County Council: Mr. Herbert Wm. Bowen County Surveyor of West Sussex.

Rebuilding Scheme at Nottingham.

It has been decided by the Nottingham Board of Guardians to erect an administrative centre, central home, and receiving home on the Hartley-road site. Plans have been prepared by Mr. E. R. Sutton, architect, and the estimated cost of the scheme will be £5,350.

FIFTY YEARS AGO.

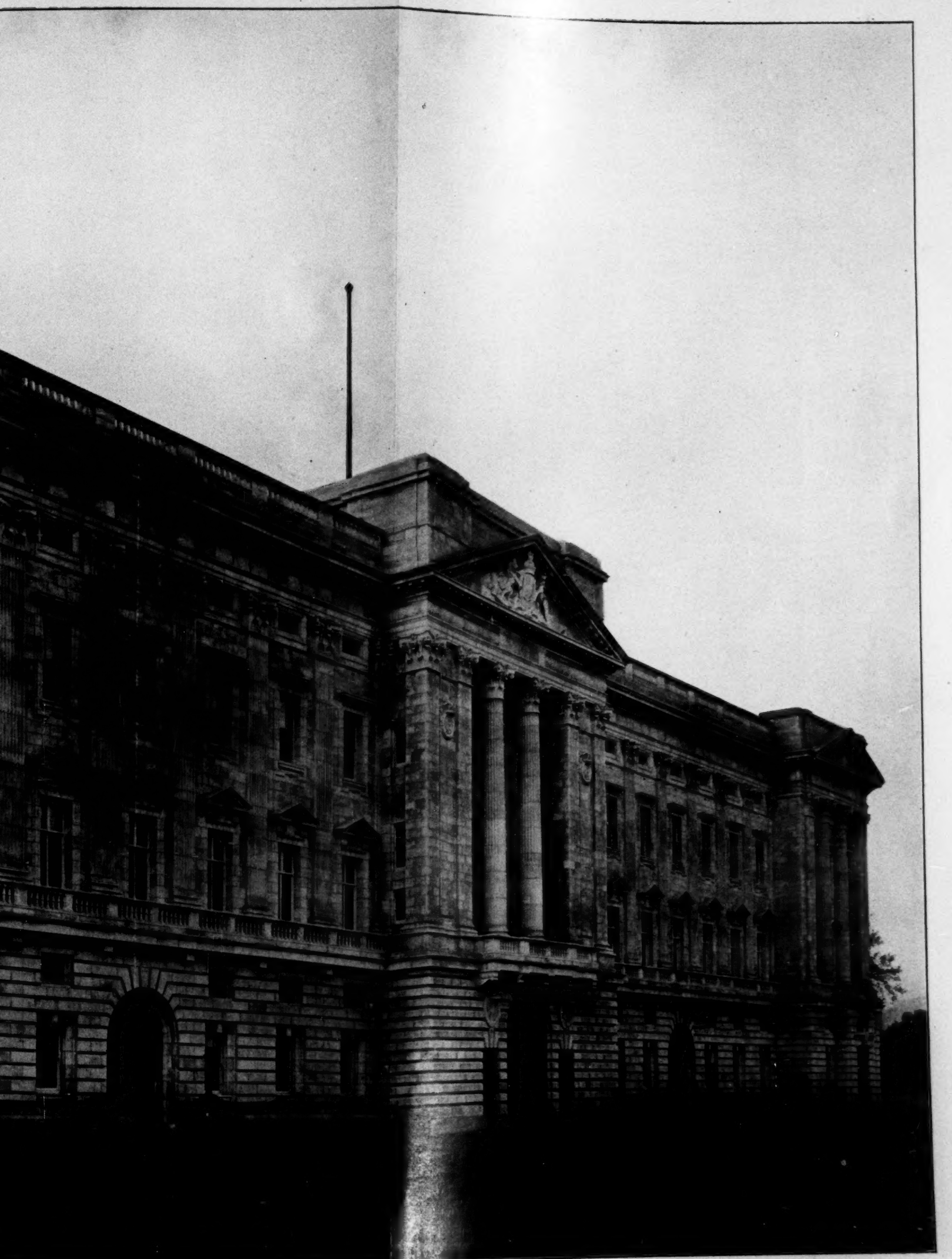
From the *Builder* of November 14, 1863.

EXTRACT from the notice of a meeting of the Manchester Architectural Association:—"On the Creation of a New Style"; "Detail in its Inherent and Relative Proportions"; "Symbolism"; "Church Architecture of the Present Day: its Position and Requirements"; "Competitions, with a Proposed Plan for Obviating the Evils at Present Resulting Therefrom"; "Colour in Relation to Architectural Decoration"; "A Proposed Plan for Equalising the Various Systems of Measurement Now in Use"; "On the Transfer of Land and the Law of Contracts"; "Stained Glass"; "Concrete," etc., etc.

*** This shows that the same subjects perennially interest us, as will be seen by the notice of the "American Style Architecture" in this issue.—ED.

NEW FRONT, BUCKIN

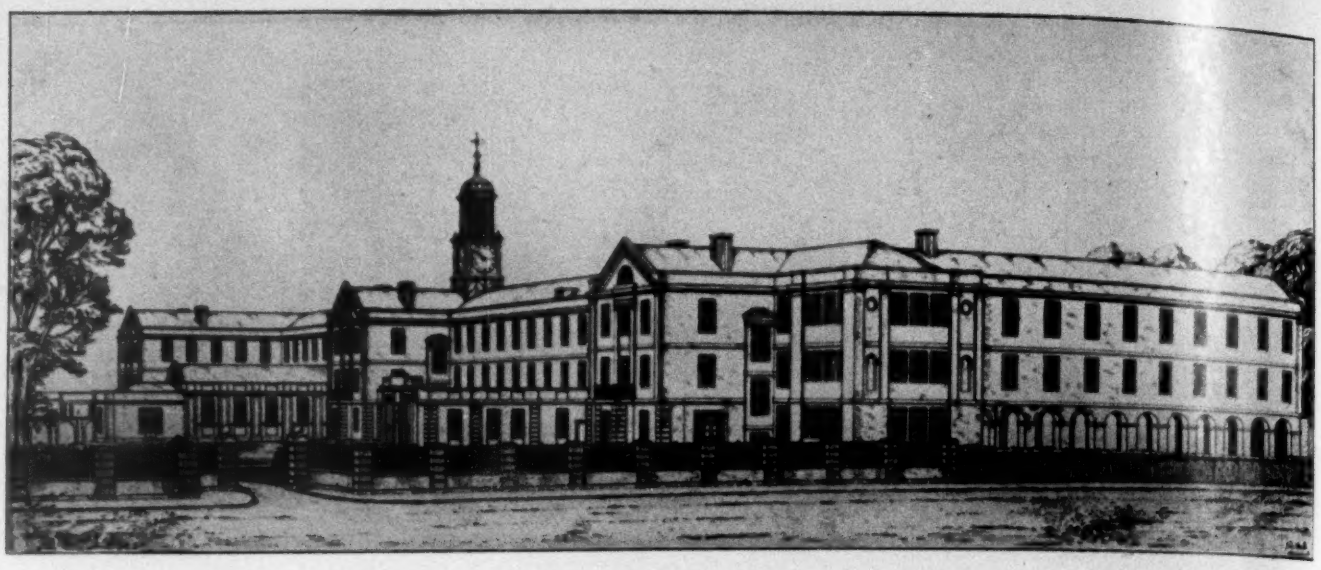
Sir ASTON WEBB, C.B.,

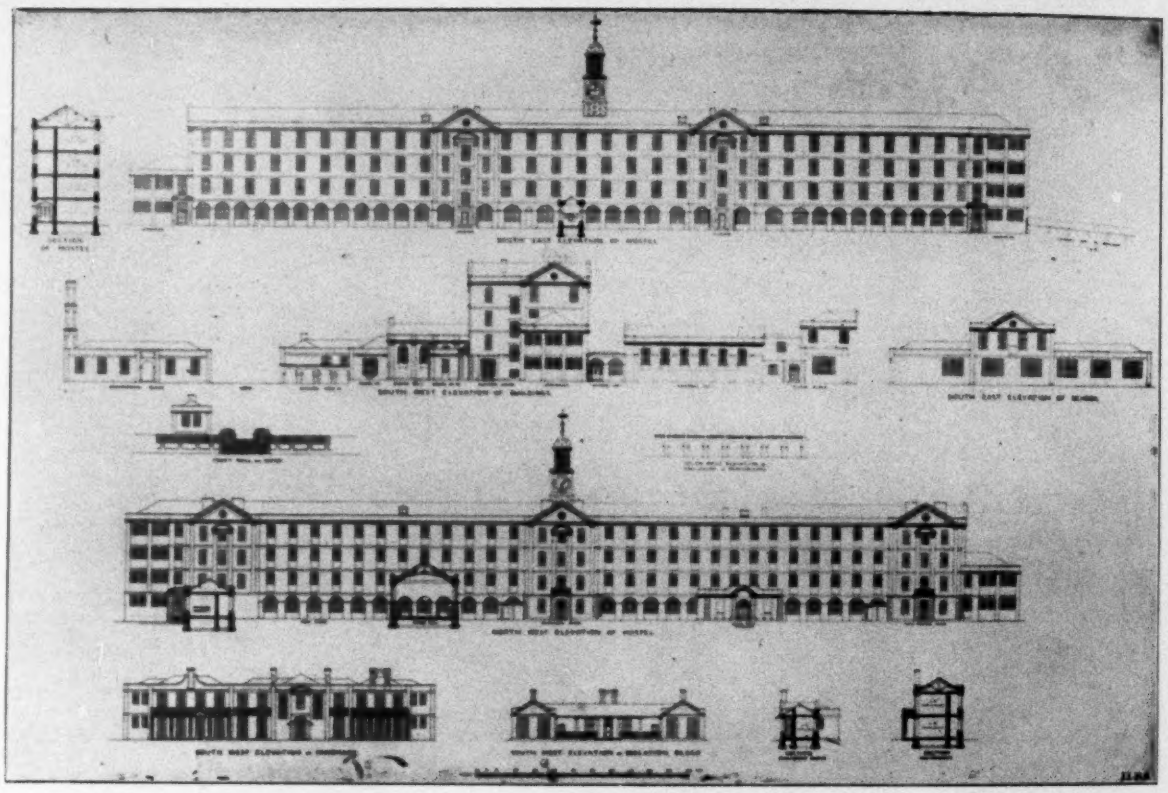


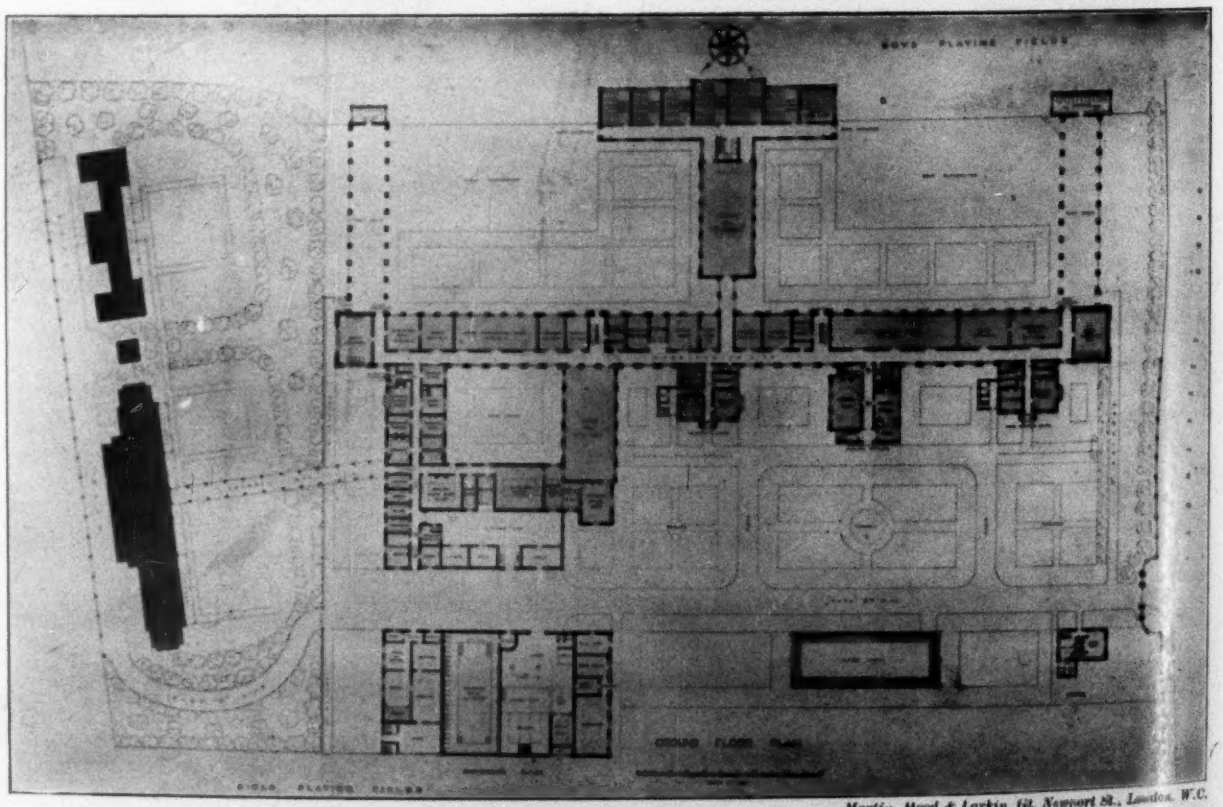
Martin, Hood & Larkin, Gt. Newport St., London, W.C.

EW FRONT, BUCKINGHAM PALACE.

Sir ASTON WEBB, C.B., R.A., ARCHITECT.



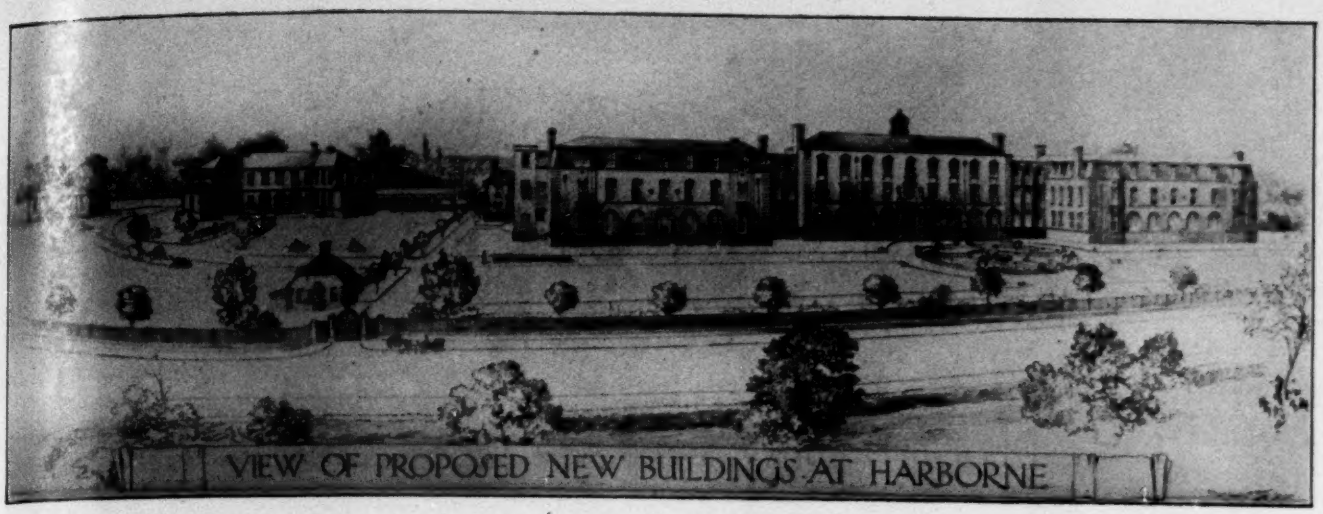


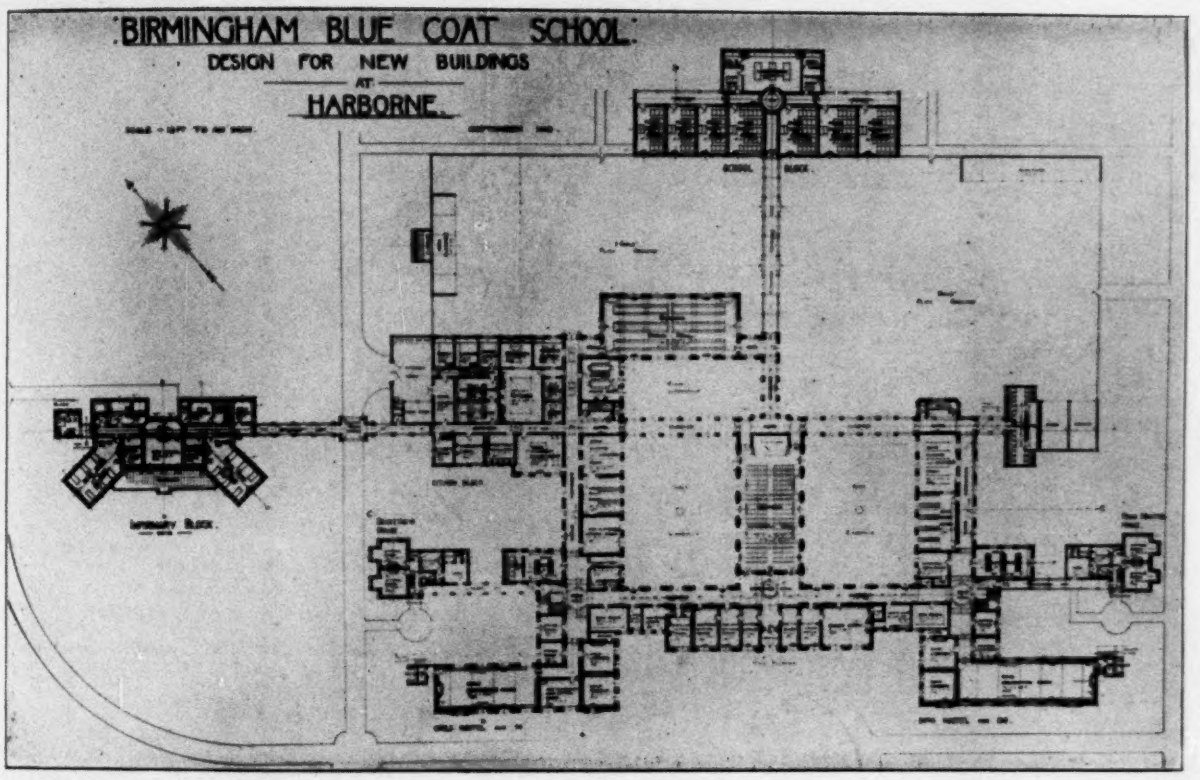


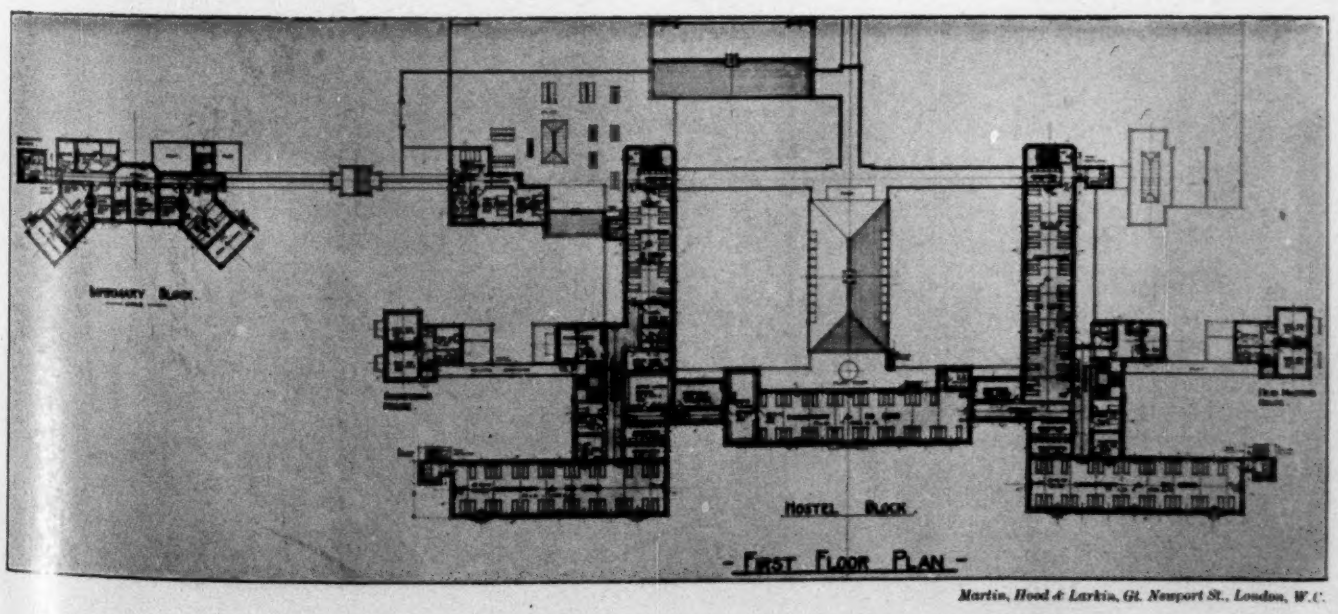
Martin, Hood & Larkin, 61, Newport St., London, W.C.

NEW BLUE COAT SCHOOL, BIRMINGHAM.

SELECTED DESIGN BY Mr. J. L. BALL, ARCHITECT.



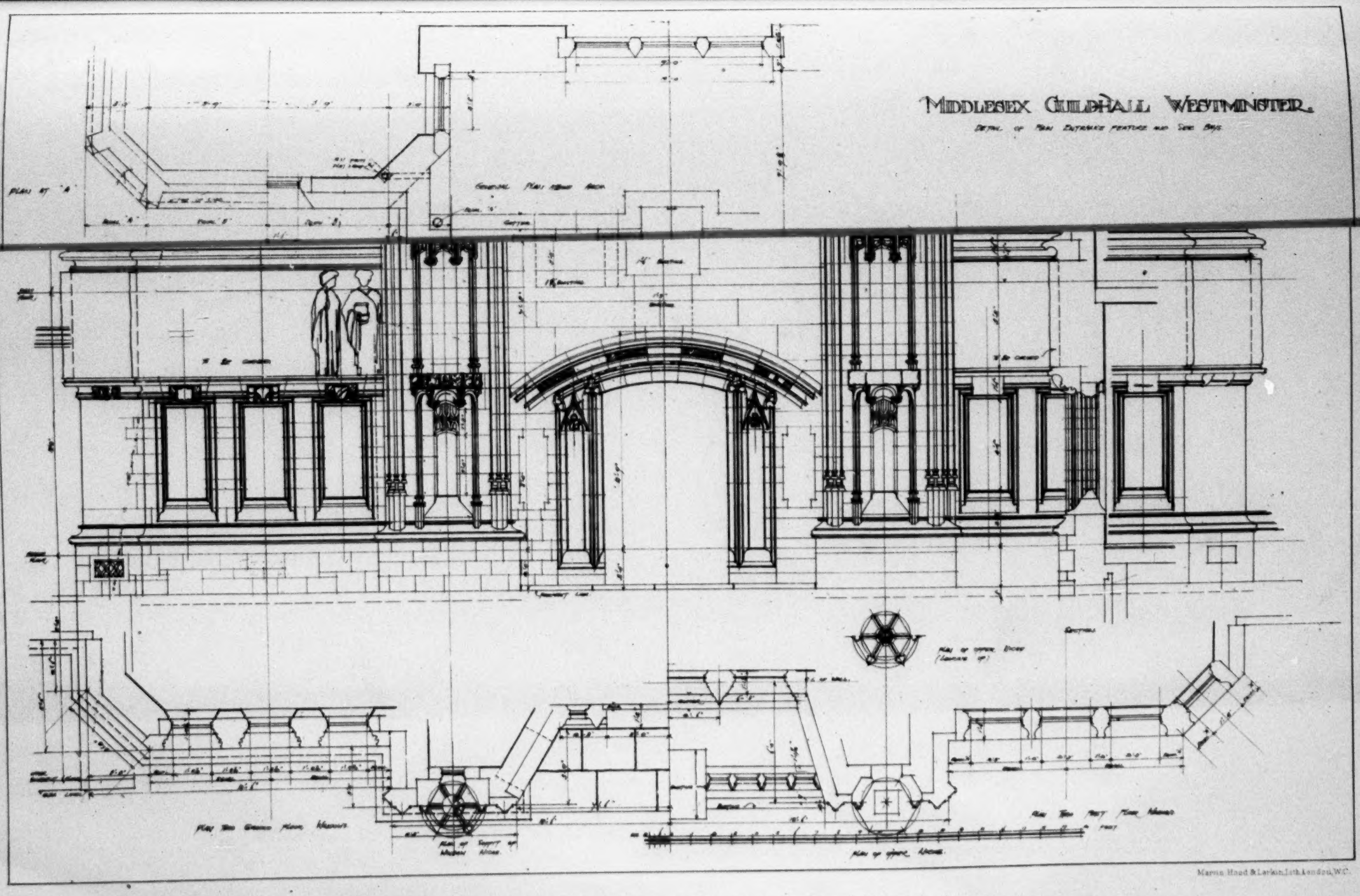




Martin, Hood & Larkin, 61, Newport St., London, W.C.

NEW BLUE COAT SCHOOL, BIRMINGHAM.

DESIGN SUBMITTED IN FINAL COMPETITION BY Mr. MARCUS O. TYPE, A.R.I.B.A.

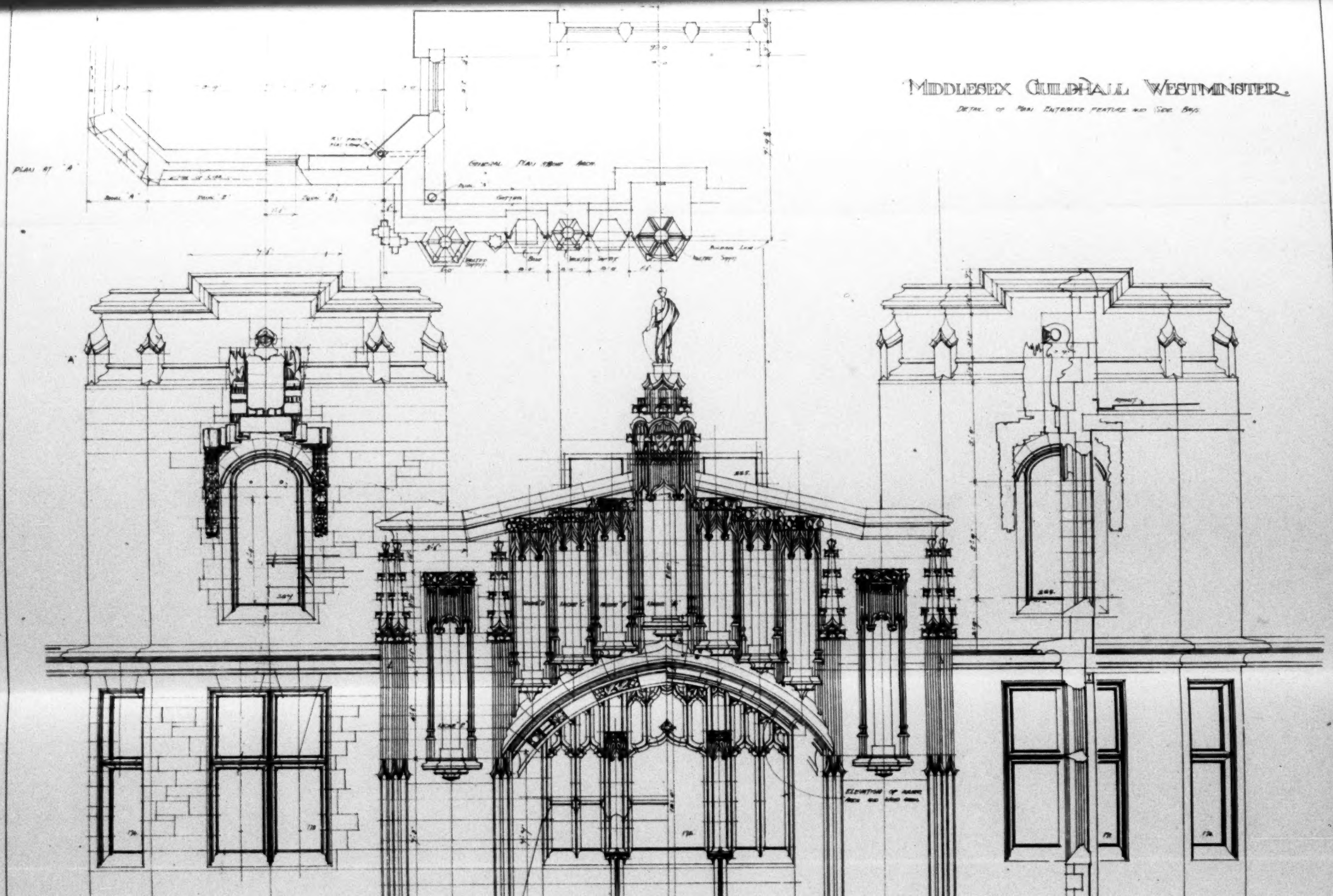


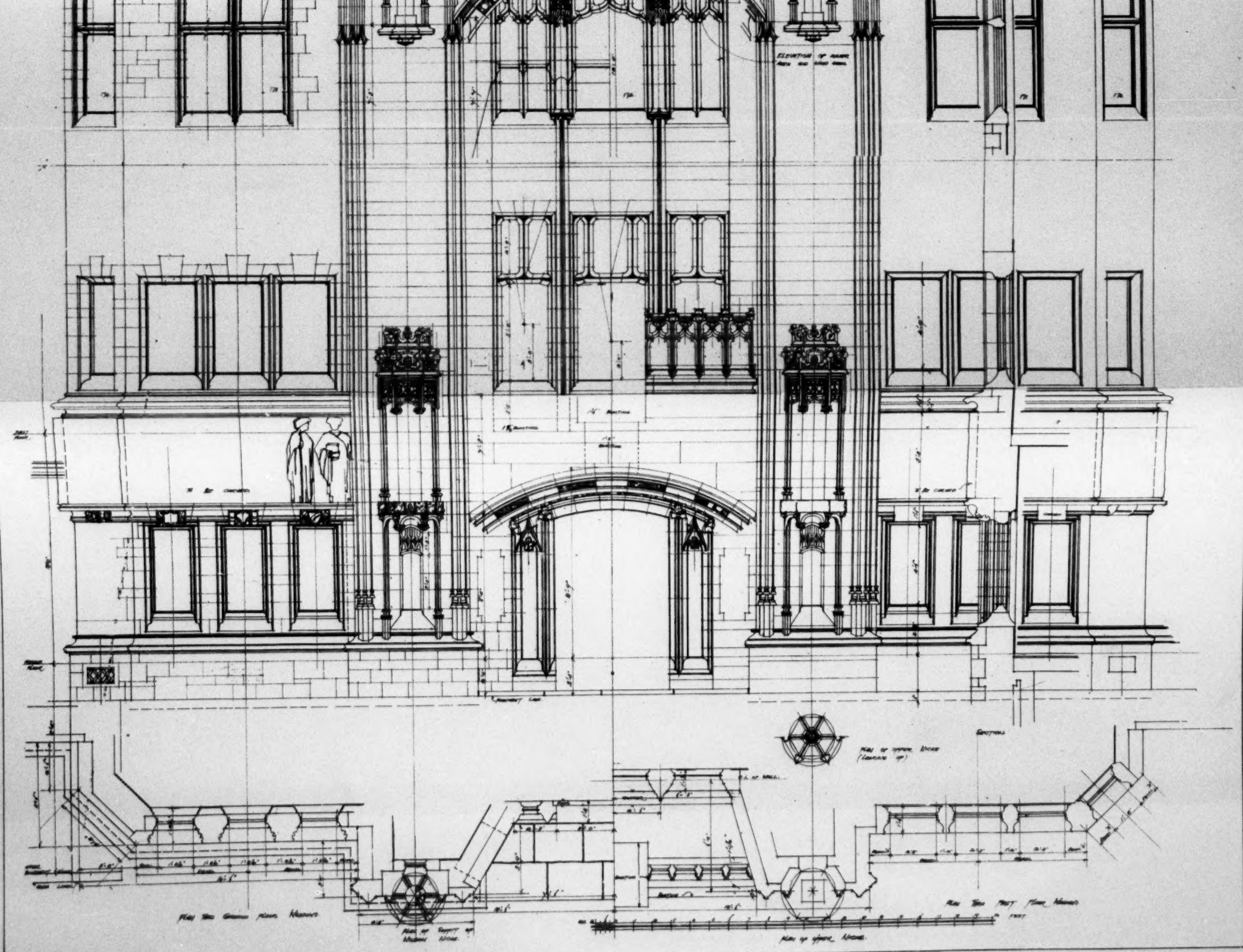
Marvin Hood & Larkin, 15th London, W.C.

MIDDLESEX GUILDHALL, WESTMINSTER.—Messrs. GIBSON, SKIPWITH & GORDON, ARCHITECTS.

MIDDLESEX GUILDHALL WESTMINSTER.

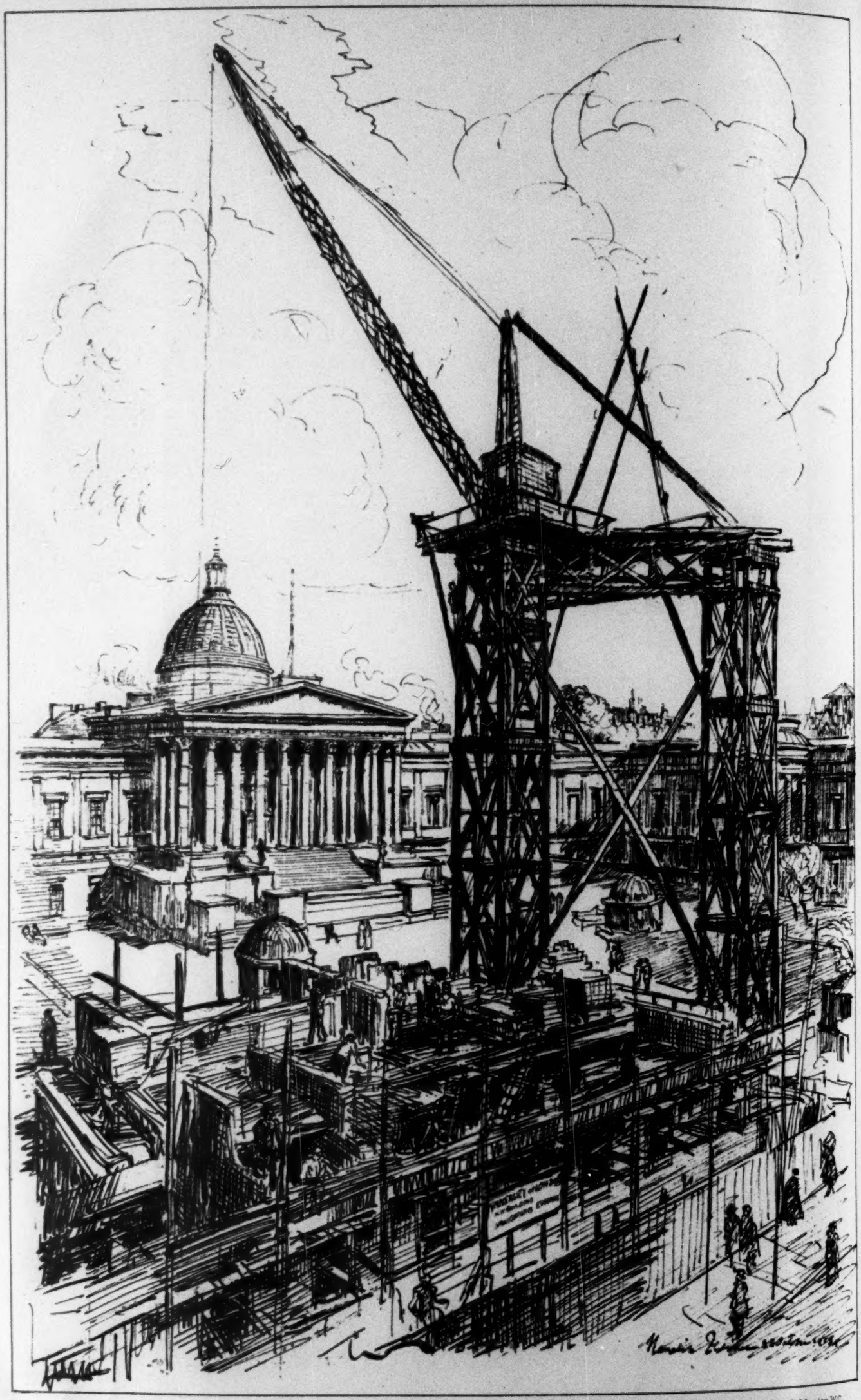
DETAIL OF MAIN ENTRANCE FEATURE AND SIDE BAYS.





Martin Hood & Larkin, 15th London, W.C.

MIDDLESEX GUILDHALL, WESTMINSTER.—Messrs. GIBSON, SKIPWITH & GORDON, ARCHITECTS.



Martin, Hood & Larkum Ltd, London, W.C.

UNIVERSITY COLLEGE, NEW BUILDINGS UNDER CONSTRUCTION.

FROM A DRAWING BY MR. HANSLIP FLETCHER.

THE BUILDER, NOVEMBER 14, 1918.

Martin Hood & Larkin, Lith. London, W.C.

QUEEN'S COLLEGE, CAMBRIDGE.—From a Drawing by Mr. Hedley A. Mobbs.

C

MIDD

ERECT
by
Ho
County Cou
minster has
designs of
Gordon, o
the collabo
M.Inst.C.E.,

The site c
having a fro
facing West
to Little
frontages al
thereby pr
admission o

The south
covered for
devoted to
as accommo
for the work
the new st
courts of ju
as the apart
meetings ar
Middlesex C

The old
antiquity, w
of last centu
structure e
of Mr. S. P
foundations
Sanctuary.
partly recon
quence of th
the work to
to demolish
to erect th
commenced
formally ope

In the cou
by the contr
Carmichael,
discovery w
rubble cone
constituted
belfry of the
and about 8
on elm and h
closely toget
consists of g
the employm
the inference
knowing the
ground in th

CONSTRUCTION SECTION.

MIDDLESEX GUILDHALL, WESTMINSTER.

ERECTED on the site formerly occupied by the Middlesex Quarter Sessions House and the offices of the Middlesex County Council, the new Guildhall in Westminster has been built in accordance with the designs of Messrs. J. S. Gibson, Skipwith, & Gordon, of Old Bond-street, W., with the collaboration of Mr. H. T. Wakelam, M.Inst.C.E., the County Surveyor.

The site covers an area of some 17,150 sq. ft., having a frontage of 102 ft. to Broad Sanctuary, facing Westminster Abbey, and one of 160 ft. to Little George-street. The two shorter frontages also abut on public thoroughfares, thereby providing ample facilities for the admission of natural light during the daytime.

The southern portion of the site has been covered for several centuries by buildings devoted to the administration of justice, and, as accommodation of the kind was still required for the work of the Middlesex Quarter Sessions, the new structures were planned to include courts of justice with auxiliary offices, as well as the apartments and offices required for the meetings and executive departments of the Middlesex County Council.

The old Guildhall, a building of great antiquity, was demolished at the beginning of last century, and replaced by the octagonal structure erected in 1805 from the designs of Mr. S. P. Cockerell, and standing on the foundations of the old belfry tower of the Sanctuary. The building was enlarged and partly reconstructed in 1892–93, but, in consequence of the large increase of the staff and the work to be done, it was decided in 1910 to demolish all the buildings on the site and to erect the present structure, which was commenced in October, 1911, and will be formally opened at the end of this year.

In the course of the preliminary excavations by the contractor for the new works, Mr. James Carmichael, of Wandsworth, S.W., an interesting discovery was made in the form of a heavy rubble concrete raft, which appears to have constituted the foundation of the isolated belfry of the Abbey. The raft was 5 ft. thick and about 80 ft. by 70 ft. in plan, and rested on elm and beech piles about 10 ft. long, driven closely together into the subsoil. As the latter consists of good ballast, it would appear that the employment of piles was scarcely necessary, the inference being that the original builders, knowing the uncertain bearing power of the ground in the district, made use of piles as a precautionary measure. The old belfry was a masonry tower 60 ft. high with a leaded spire, having been built in the middle of the thirteenth century, and destroyed about 1760.

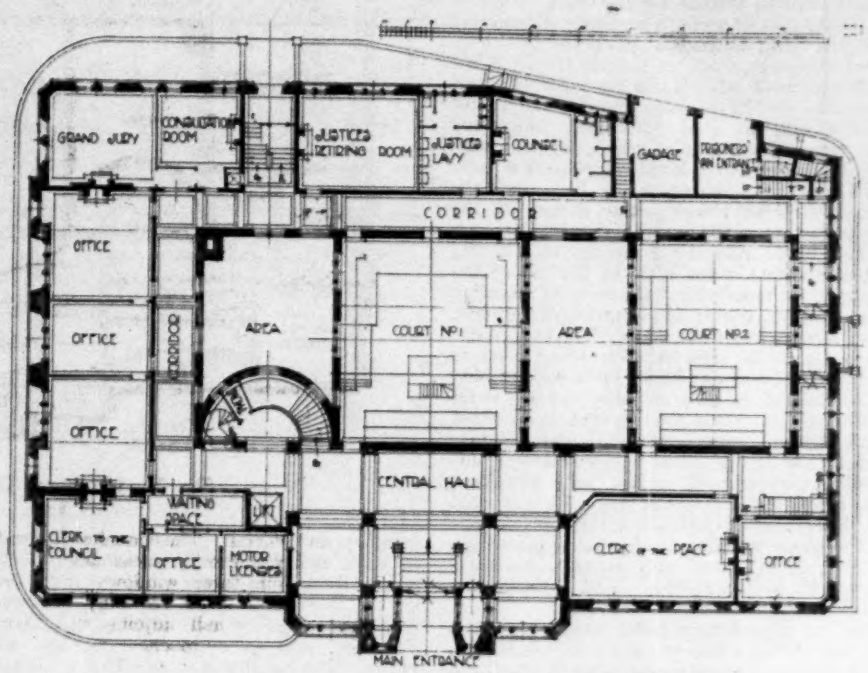


Fig. 2. Middlesex Guildhall: Ground Floor Plan

In this connection we may say that the place of refuge known as the Sanctuary was presumably founded by Edward the Confessor, and in later times there were two branches of the institution, known as the Great Sanctuary and the Little Sanctuary. At the western end of the latter there were remains, in the reign of George II., which are described by Maitland as those of "a prodigious strong stone building, of two hundred and ninety feet square, or seventy-two feet and a half the length of each side; and the walls in thickness no less than twenty-five feet. . . . The area of this exceedingly strong tower, by a wall from east to west, three feet in thickness, was divided into two spaces, about eleven feet each in width, representing a frame for bells, which plainly evinces it to have been the strong Bell Tower that was erected in the Little Sanctuary by Edward III. for the use of the collegiate church of St. Stephen."

Referring to this structure, Stow says that King Edward III. "also builded to the use of this chappell, some distance west, in the Little Sanctuarie, a strong clochard of stone and timber, covered with lead, and placed therein three great bels, since usually rung at coronations, triumphs, funerals of princes, and their obits." The tower, or part thereof, was afterwards used as the "Three Tuns" tavern. The church adjoining was demolished about 1750, and on part of the site a meat market was established, the market having been removed when the site was cleared for the erection of the Guildhall in 1805.

It is interesting to note that in Besant's "History of Westminster" reference is made to the belfry foundation, which the writer states is somewhere near the Abbey and, when discovered, its dimensions will be found to be about 80 ft. square. The discovery thus anticipated is the one actually made by

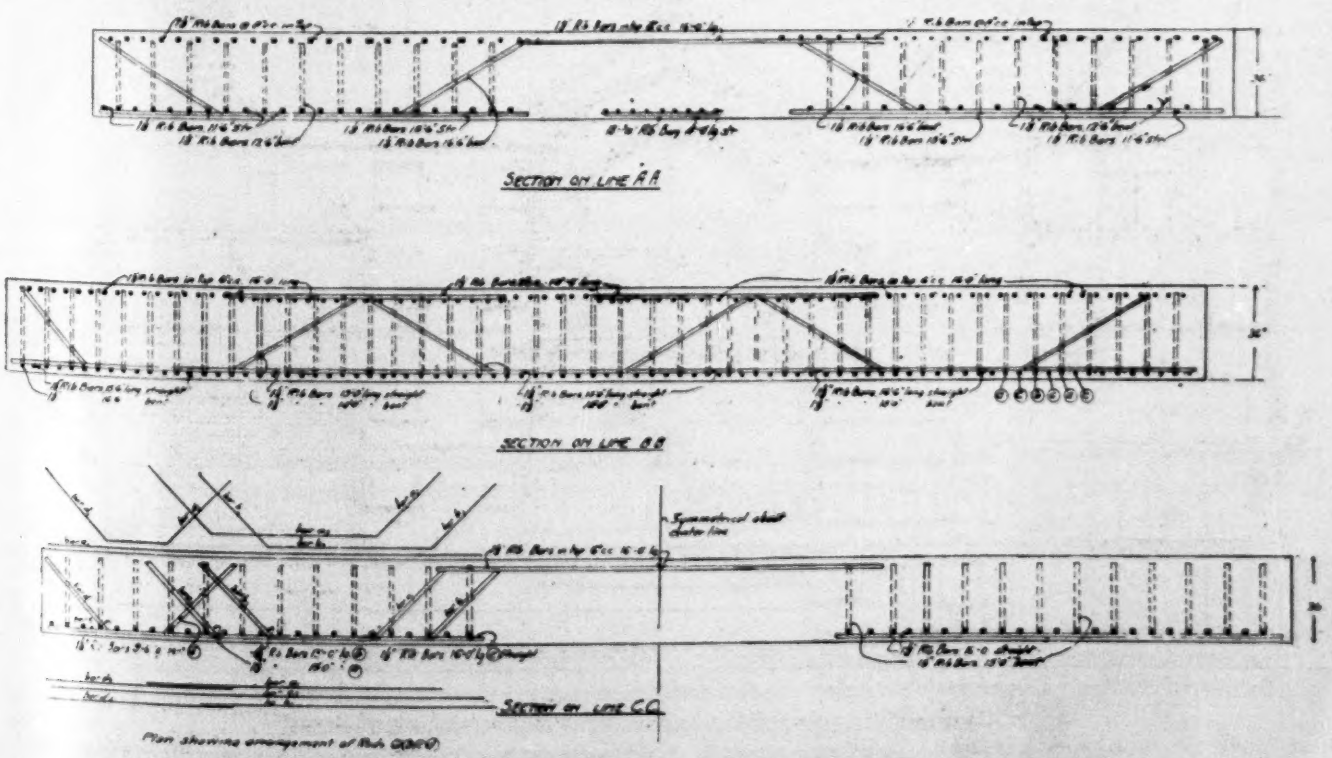


Fig. 1. Middlesex Guildhall: Sections of Reinforced Concrete Foundation Raft for Tower.

Mr. Carmichael when commencing the construction of the new Guildhall, the dimensions of the ancient raft corresponding very nearly with those estimated by Besant.

Another point worthy of remark is the essential similarity of ancient and modern foundations on the site, for the tower of the new Guildhall is built up from a concrete foundation raft 3 ft. thick, designed by the Trussed Concrete Steel Company, Ltd., of Caxton House, S.W., and reinforced with Kahn rib bars. The raft measures 44 ft. square approximately, and carries the six steel stanchions supporting the tower, the weight of which, together with the floor and other loads, represents a total load of about 1,800 tons. In Fig. 1 will be found sections showing the design of the reinforcement in the foundation raft.

The tower rises to a height of 108 ft., measured from street level to the top of the parapet, the remainder of the building including five stories, comprising basement, ground, first, second, and third floors. The main outer walls are 50 ft. high from pavement level to the top. One of our Plates gives an elevation and details of the main entrance and side bays.

The greater part of the basement is allocated to the Prison Department, being subdivided into about 100 cells, with accommodation for warders, wardresses, police, and witnesses. The remaining part of the basement is divided into brick-vaulted chambers for the safe custody of the many valuable records belonging to the County Council, and also includes chambers occupied by warming and ventilation apparatus.

On the ground floor facing east is the main entrance giving access to a spacious central hall, with the main stairs semicircular in plan, and a lift on the left hand. A wide corridor extending round the building is in direct communication with the central hall. On the same floor two courts of justice are provided, both of these being two stories in height. They are lighted from two interior areas, which also serve for the admission of light to the central hall, the staircase, and the corridor. The various rooms next to the outer walls have been planned for use by the Justices, the Clerk of Peace, counsel, grand juries, and also by the Clerk to the County Council, his assistants, and others requiring office accommodation. The arrangement of this floor is illustrated by Fig. 2.

The first floor is occupied by committee and private rooms for the work of the County Council.

On the second floor, a plan of which is given in Fig. 3, is the Council Chamber, two stories in height, planned to seat 110 members and officials. The chamber is situated between the two interior areas and receives ample light from three windows along each of the two longer sides. A large ante-room over the entrance hall adjoins the Council Chamber, and is approached by the main stairs. The remainder of the floor is occupied by rooms for members of the Council, and offices for the County Surveyor, the Accountant, and members of the staff. The third floor is devoted to offices, with the exception of accommodation for the caretaker. Fig. 4 is a longitudinal section of the building which will enable our readers to realise the nature of the interior design.

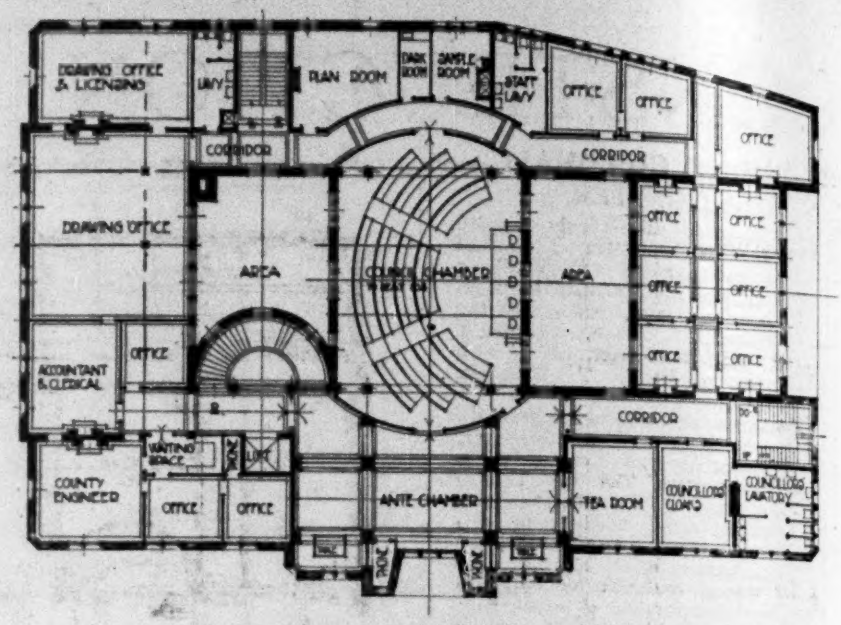


Fig. 3. Middlesex Guildhall: Second Floor Plan.

Structurally considered, the building has self-supporting outer walls with an interior steel frame for the support of floor and other loads. Fig. 5 is a plan showing the steelwork at ground-floor level, and is generally typical of the construction in the floors above. The ends of the main beams terminating at the outer walls are carried by piers in which stanchions are embedded, while in the interior of the building steel stanchions and columns are relied upon entirely for support. These stanchions and columns, with the exception of nine members carried by the reinforced concrete raft under the tower, are supported by reinforced concrete footings designed by the Trussed Concrete Steel Company, Ltd. The footings vary in size up to 11 ft. square and are reinforced by Kahn rib bars, as represented in Fig. 6. Owing to the simplicity of the floor plans, no beams of exceptional dimensions were required, a feature sufficiently illustrated by Fig. 5. The whole of the structural steelwork was executed by Messrs. Redpath, Brown, & Co., Ltd., of Riverside Works, East Greenwich, S.E.

All the suspended floor panels were constructed by Messrs. Diespeker & Co., Ltd., of Holborn-viaduct, on their "Bigspan" system, embodying a combination of hollow tile and reinforced concrete, as shown by the sections reproduced in Fig. 7. The supporting steel beams are encased in concrete, suitably reinforced, as a protection against fire, and the hollow tiles, measuring 10½ in. by 6 in. in cross-section by 10½ in. long, are embedded in reinforced concrete. The tiles are laid in parallel rows, about 2 in. apart, on planks extending between the steel joists, the sides of the tiles, and the top of the planks forming a series of moulds for the reinforced concrete beams constructed between the rows of tiles. The

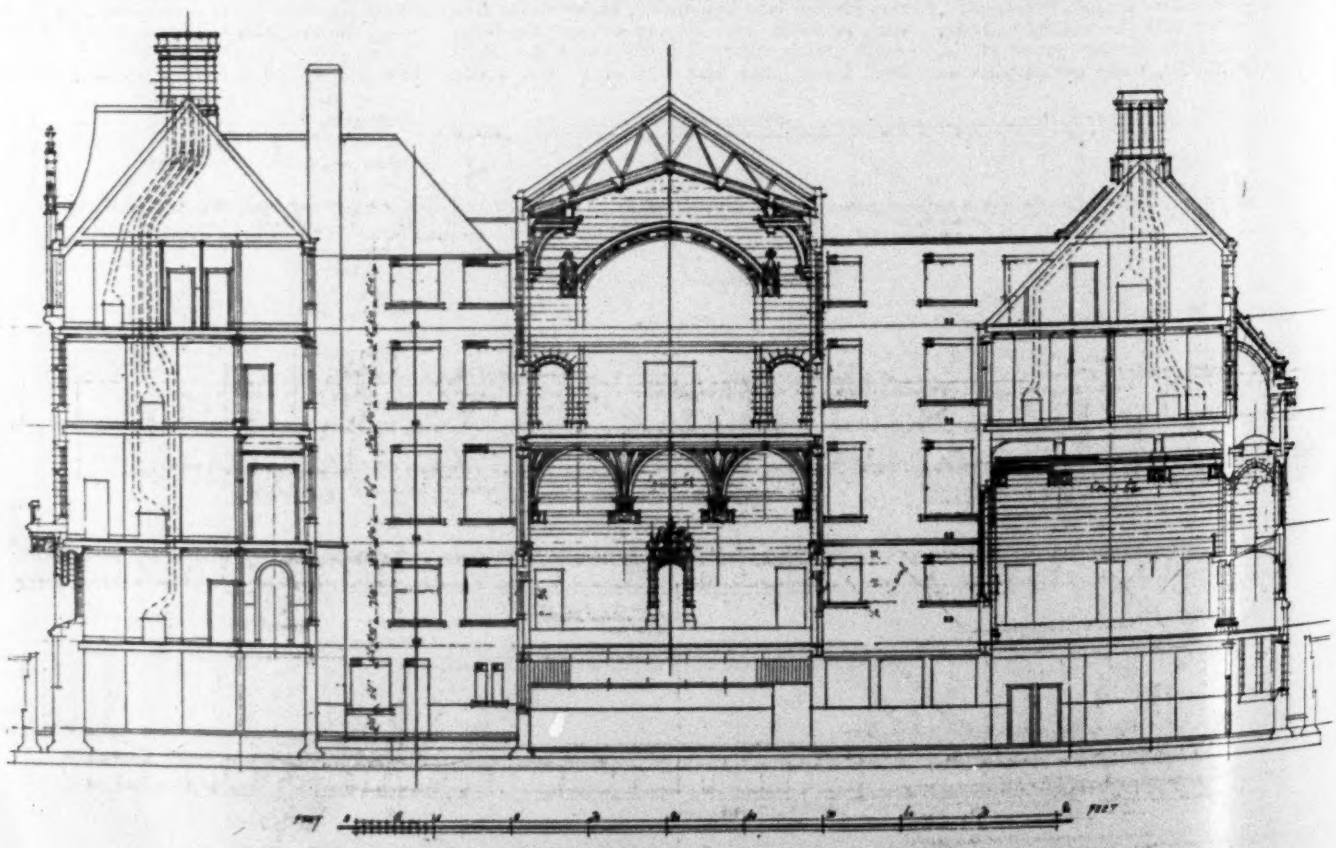


Fig. 4. Middlesex Guildhall: Longitudinal Section.

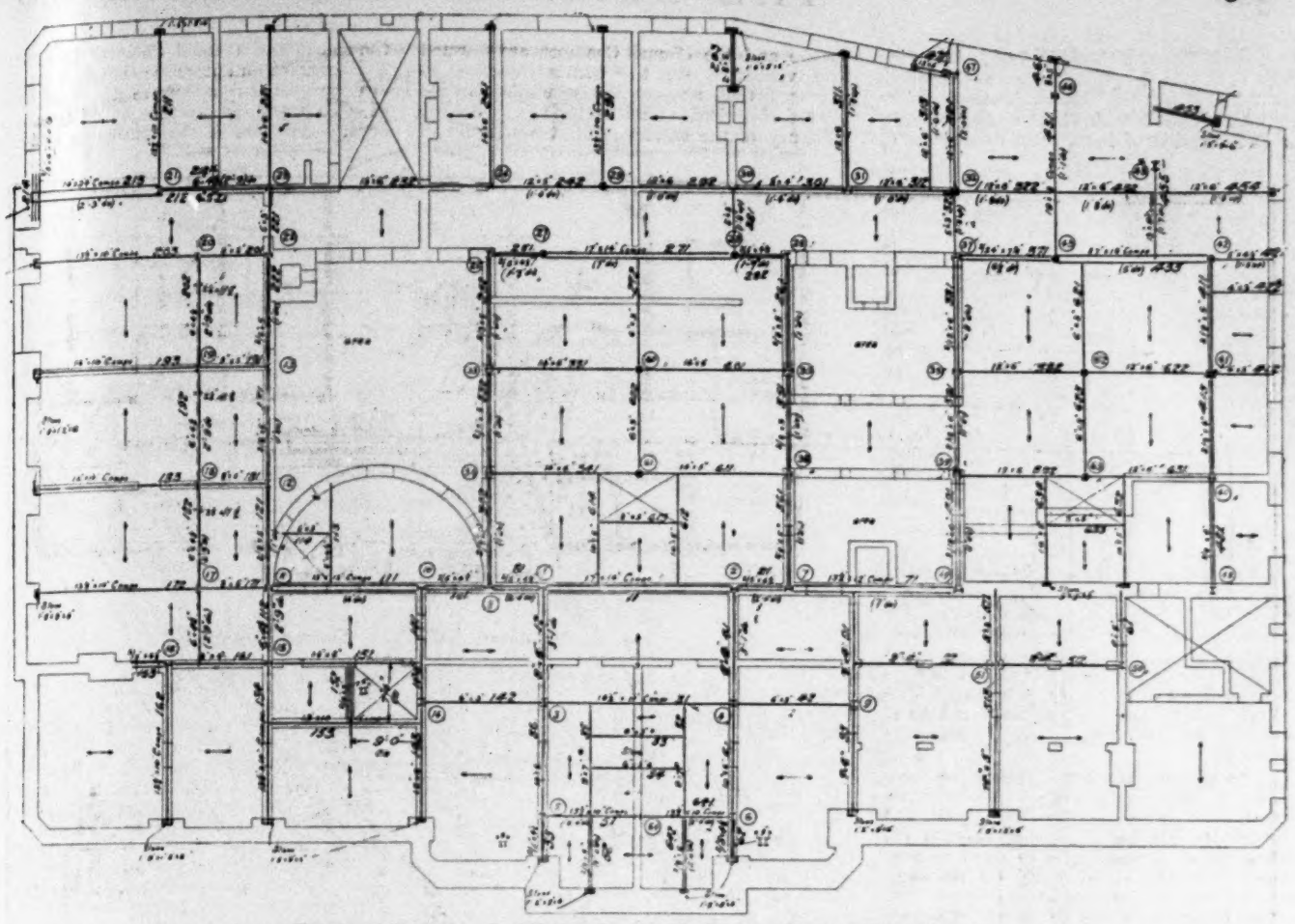


Fig. 5. Middlesex Guildhall: Steelwork Plan at Ground Floor Level.

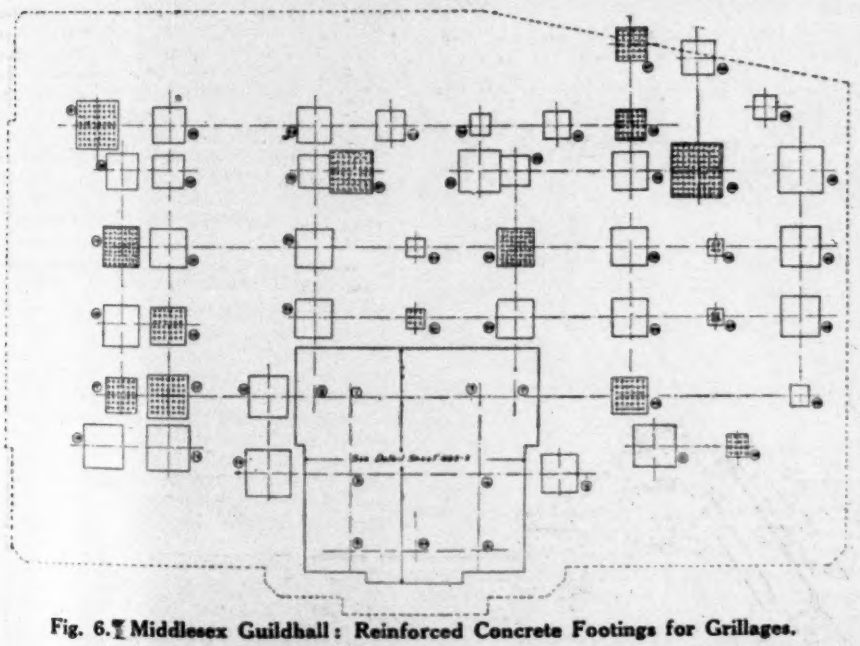


Fig. 6. Middlesex Guildhall: Reinforced Concrete Footings for Grillages.

tension bars are held in position during the deposition of the concrete by means of steel clips, as represented in the section, the clips also acting as web reinforcement for withstanding diagonal tension resulting from shearing stress and flexure. About 2½ in. of concrete is deposited above the tiles, making the floor 8½ in. thick without any beams projecting below the under surface. To provide for continuity in the vicinity of main and secondary steel beams, bars are laid over such supports in the upper part of the floor in conjunction with other steel clips, as shown by the drawing. All the floors were calculated for a superimposed load of 1½ cwt. per square foot. Messrs. Diespeker & Co. also executed the mosaic work in the staircases and corridors of the building.

The roof over the Council Chamber is carried by two steel trusses, with a span of 37 ft. 6 in., supporting 5 in. by 3 in. rolled-steel purlins, spaced 3 ft. apart centre to centre. One of these trusses is illustrated by the drawing reproduced as Fig. 8. Concrete slabs are laid on the purlins and covered with slating. The roof construction generally has been designed so as to utilise the interior space to the best advantage.

The warming, ventilation, and hot-water systems throughout the building were installed

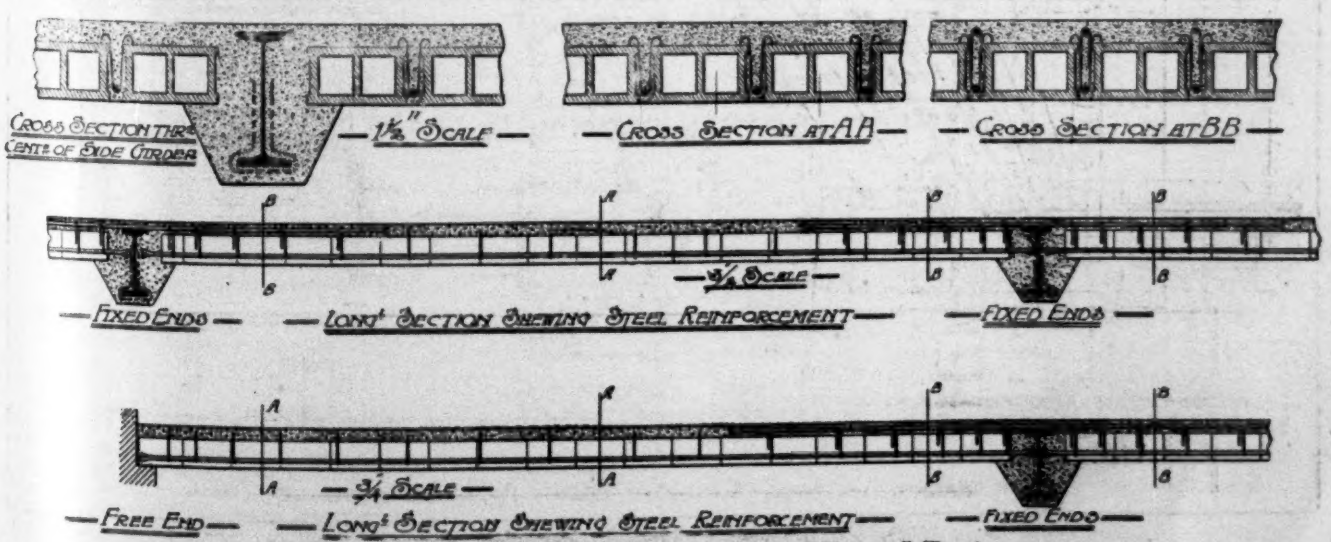


Fig. 7. Middlesex Guildhall: Diespeker's Patent "Bigspan" Flooring.

by Messrs. Rosser & Russell, Ltd., of Charing Cross, S.W. In the general offices and corridors the "Nuvacuumette" steam-heating system has been adopted, with direct acting radiators for the diffusion of heat. The two courts of justice and the Council Chamber are warmed and ventilated on the plenum system, so arranged that any of the windows can be opened if desired without interfering with the efficiency of the system. The temperature of the courts and Council Chamber is controlled by means of an automatic electrical regulator, arranged so as to ensure the maintenance of a constant temperature at all times. The control dampers of the ventilation system are

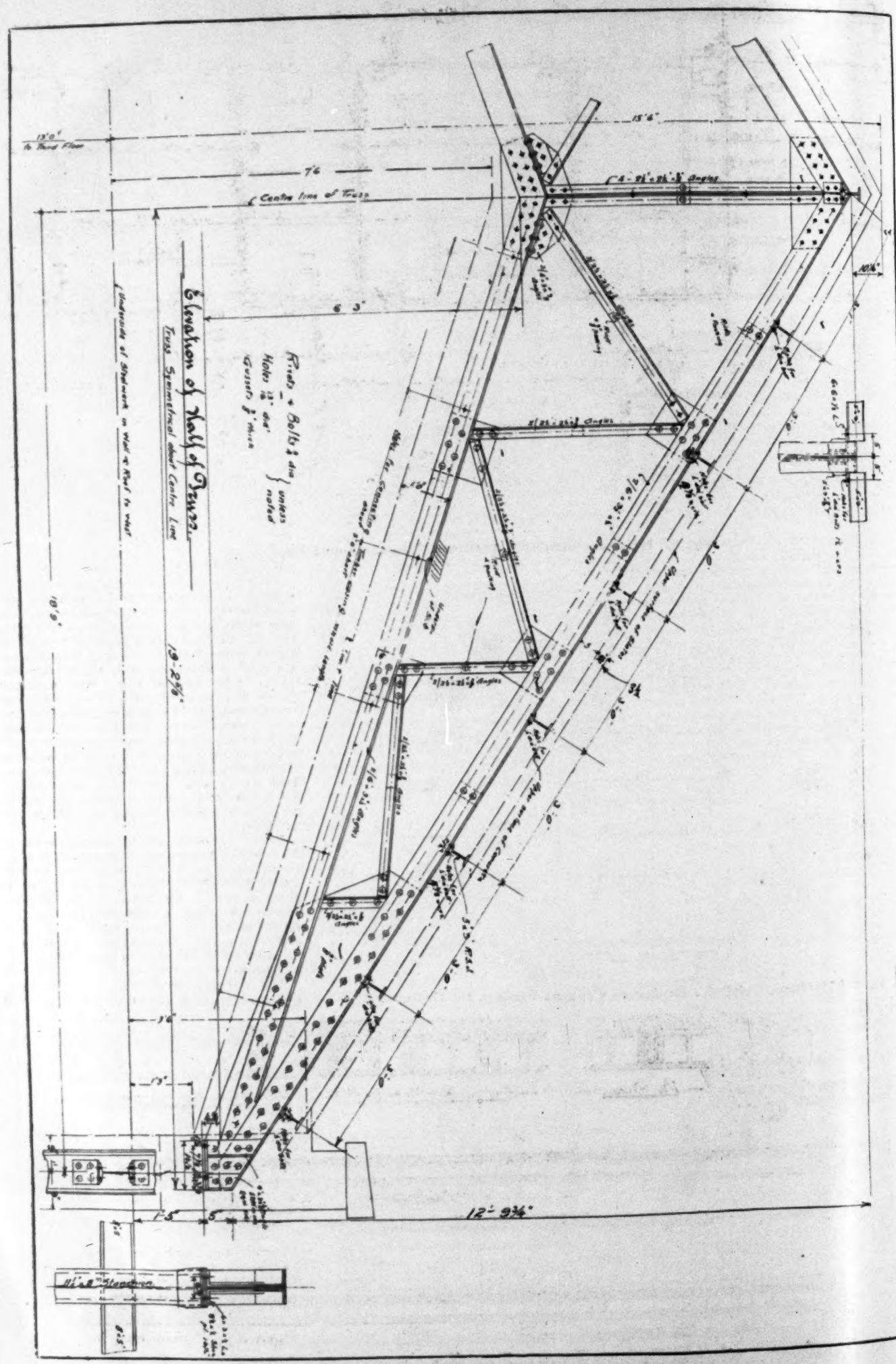
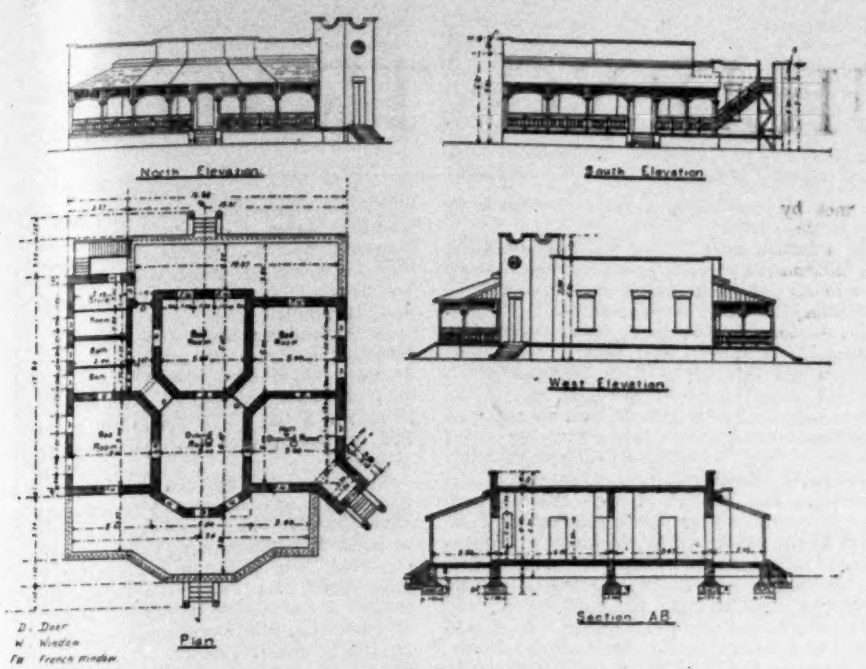

Elevation of Half of Truss
Truss Symmetrical about Centre Line
Rivets & Bolts & the } unless
Holes } noted
Centre of Truss
12'-9¾"

Fig. 8. Middlesex Guildhall: Half Elevation of Roof Truss over Council Chamber.



Bungalow at Gordon College, Khartoum.

pneumatically operated from a special switchboard situated in the fan-room in the basement, thus making it easy for the engineer-in-charge to regulate the temperature as required.

The lift installation includes three service lifts in addition to the passenger lift adjoining the main staircase. These appliances were supplied by Mr. J. Stannah, of Bankside, S.E.

There are two drainage systems, one for rain water at basement ceiling level and one for soil and waste at low level with a pneumatic ejector to raise the water to a height sufficient for discharge into the sewer and to obviate any risk of flooding. The sanitary fittings were supplied by Messrs. John Bolding & Sons, Ltd., of Davies-street, W., and the whole of the fire appliances by Messrs. Merryweather & Sons, Ltd., of Bermondsey, S.E.

All the elevations of the building are in Portland stone, and, having regard to the vicinity of the Abbey, the Gothic style was adopted by the architects, with results which our readers will be able to judge for themselves.

TROPICAL BUILDINGS.

THE provision of suitable buildings, both for public and private purposes, is of primary importance in tropical regions. Too often the buildings erected by Europeans are of a type quite unsuitable to the local conditions, and sometimes they are of purely European type.

Much may be learned from a study of native dwellings, and, although these may not be perfectly adapted to foreign modes of life, yet the fundamental principles upon which they are designed are generally worthy of being followed.

In the Report of the Wellcome Tropical Research Laboratories, issued by the Sudan Government Department of Education, the question of tropical buildings is discussed at some length by Mr. W. H. McLean and Mr. G. E. Hunt, the Municipal Engineer and the Assistant Municipal Engineer of Khartoum.

One important point to be borne in mind is that white men in the tropics, besides being well protected from the heat rays of the sun, should also be protected against the light rays which are so harmful to the nervous system.

The pigmentation in the skin of a coloured man cuts off these light rays, and he has therefore only to shield himself from the heat rays to be perfectly comfortable. It is necessary to bear in mind this fundamental fact in comparing the native house with one suitable for the European.

The native houses in the region of Khartoum have only a few small openings in the walls, and are thus well darkened. Providing there is an adequate roof covering, such a house will be found quite comfortable for a European so far as protection from the sun is concerned.

The walls are usually of mud, which, although liable to damage by rain, has a certain advantage over brick or stone in the respect that it is cooler owing to its lower heat conductivity. Hence it does not to the same extent absorb heat during the day and radiate it during the night.

So far as circumstances permit, the following points are recommended for observance in the design and construction of dwelling-houses for Europeans in the tropics :—

(a) The walls should be protected from the sun by verandahs, especially if of brick or stone, and should have as few openings as possible if not so protected.

(b) Verandahs should not be less than 10 ft. wide, preferably of timber, as being cooler than brick or stone, brought down to within 4 ft. to 7 ft. above floor level, with an air space between the roof covering and lining, and ventilated at the top.

(c) The roofs of the house and the verandahs should be thick enough to intercept both the heat and the light rays of the sun, and should be lined if constructed of timber.

(d) The rooms should be arranged as far as possible so that each room shall get a share of the prevailing winds.

(e) Colours should be employed to which European eyes are naturally adjusted, such as the greens, dark yellows, and browns. White should be avoided, especially for exterior decoration, as the glare from it is very trying in the tropics.

The illustration gives details of one of the bungalows constructed in accordance with the foregoing principles as staff residences at Gordon College, Khartoum.

It will be noticed that verandahs have not been built at the sides, where they would have been desirable, especially on the west, the reason stated being the lack of available space.

In the central area of Khartoum the flat roof is almost universal. This type of roof is very convenient for dwelling-houses, as it affords pleasant sleeping spaces during hot weather. It is stated, however, that to keep flat roofs watertight during the rains is a matter of some difficulty.

As mosquitoes are kept down by the Sanitary Service Mosquito Brigade, nets are not required on the door and window openings, but sun shutters or louvres are fitted on all windows. The kitchen, servants' quarters, and latrines in European houses are usually detached from the main building, the latter being against an outside wall to facilitate removal of the buckets.

It is somewhat difficult to get a good foundation on alluvial soil such as Nile mud unless there happens to be a fair proportion of sand with it, which reduces the expansion and contraction. The foundations should be carried deep enough to avoid the surface cracks, and reinforcement may be necessary in some cases to prevent cracking of the walls. A further point to be noted is that the great variation in temperature appears to be deleterious to work built of very rigid materials unless special precautions are taken.

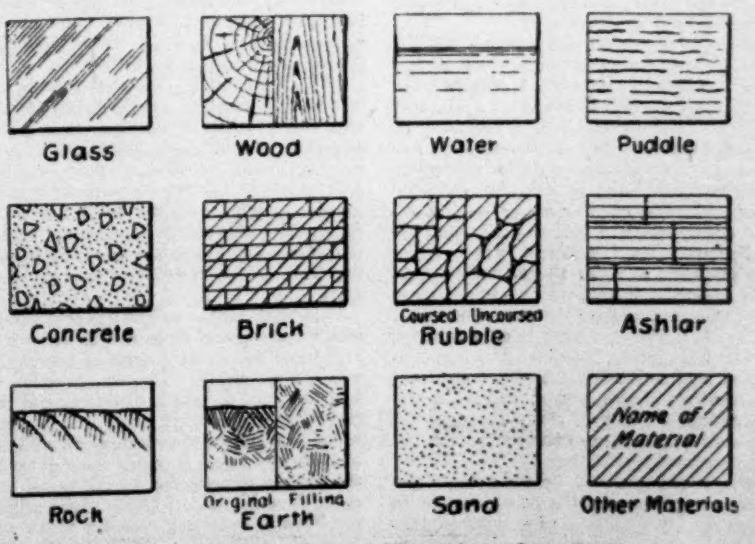
STANDARD REPRESENTATIONS OF MATERIALS IN CROSS-SECTION.

A COMMITTEE appointed by the American Society of Mechanical Engineers has recently submitted a comprehensive Report on the standardisation of methods for the representation of various structural materials in cross-section. The proposals relating to building materials are illustrated by the accompanying diagrams. The subject is one of considerable interest, and might be taken up with advantage by the Royal Institute of British Architects, as well as by the leading engineering bodies in this country.

CONSTRUCTION NOTES.

Worms in Furniture. WORM burrows in woodwork are usually the result of the depredations of the larvæ of *Anobium striatum*—the common death watch. The least troublesome method of attack is the injection of benzine (which may be done with a hypodermic syringe) into the holes. If done during the first hot days of the beginning of summer, when the perfect insects usually emerge, this is often effective in destroying both the insects and with them their progeny. A more certain but dangerous process is by the injection of a strong solution of corrosive sublimate (deadly poison) in alcohol. This is apt to discolour the wood, which requires subsequent restoration by washing with ammonia, followed by a weak solution of hydrochloric acid. The worm holes should be stopped with gum and gelatine, and a varnish of resin and spirits of wine afterwards applied to the surface. A more rough and ready process is given by Dean Swift in a satirical attack on the superstition of the Death Watch:—

> But a kettle of scalding hot water injected
> Infallibly cures the timber affected;
> The omen is broken, the danger is over,
> The maggot will die, the sick will recover.



Standard Representation of Materials in Cross-Section.

THE BUILDING TRADE.

SOME ASPECTS OF TENDERING.—III.

HAVING in the last article briefly described the methods of tendering usual in this country, a few words about the practice in France and Belgium may not be without interest.

For purposes of competition for public works one of three methods is mainly adopted. By one of these methods the administration or public authority prepares an official schedule of prices for measured work, not unlike those used by some of our Government Departments. A plan and specification of the particular work to be tendered for, together with approximate quantities priced out, according to the official schedule, to an estimated total cost, are placed at the disposition of competitors, who are asked to say whether they will undertake the work at that price and on that schedule, and, if not, they are expected to quote a percentage rebate or advance, as they deem necessary. The competitor whose revised estimate, thus arrived at, is deemed the most favourable is adjudged the contract. The proceedings are of a public character, and tend to resemble a Dutch auction.

There seems to be considerable difference of opinion among contractors in regard to this method, which is the one most in use.

In Belgium opinion appears to be more favourable to it than in France.

Critics complain that the schedules are unbalanced, some prices being excessive and others much too low, which makes the pricing out of extras at completion a very chance business; that the publicity of the adjudication, the presence of the competitors, their eagerness to secure the contract—an eagerness which it is only natural for the employer to exploit—lead to an amount of speculative bidding which is essentially immoral. As a cure for these evils it has been suggested that prior to the adjudication the administration responsible for the competition should fix, in the public interest, upper and lower limits of departure from the official schedule, and that only competitors' bids which fall within those limits should be considered. The limits would be under seal and only disclosed after the competition. The advantages are that competitors are saved a good deal of the labour of building up prices for themselves, that the administration, through its technical advisers, knows exactly what it wants in the way of materials and where to get them, and, having included for definite things in the prices, need have no hesitation in insisting upon them being supplied in fulfilment of the contract, that these schedules facilitate the preparation of provisional estimates by departments for the purpose of securing in advance appropriations of money, and that, where sudden urgency arises, they facilitate the rapid putting in hand of work.

Probably this latter reason, together with the convenience of dealing with maintenance works, accounts for the use of such schedules by certain public departments in this country.

A variation of the method described is to do away with the public competition element and substitute a selected competition of a private character. This method is inveigled against as restrictive of competition and derogatory of public control through its lack of publicity.

Another method which appears to be popular in France, but hardly so in Belgium, calls for competitors to produce their own plans, specifications, and priced detailed estimates for large public works, leaving them a large freedom to show what they can do, the administration eventually choosing the scheme, or schemes, or portions of schemes, which suits its convenience. This method is praised because it affords scope for individual initiative, absolves the administration from responsibility, since the contractor has to guarantee his own design, and relieves it from the danger of extras, since the contract is a lump sum contract, and the contractor has to provide a completed scheme.

But others condemn it, saying that the administration approaches the consideration of the various schemes with a preconceived bias of its own which prejudices the ultimate decision. This objection, it is suggested, might be met by appointing a jury of experts to decide the matter.

It is further alleged that the administration has information at its disposal and dispensatory powers at its back which are unknown or impossible to any contractor, and thus a valuable element of economy in construction is neglected; it is also said that certain competitors get tips as to such facilities which are not accorded to all competitors. If the administration absolves itself from all responsibility it cannot interfere in the carrying out of the work without becoming partially responsible; if it makes alterations there is an end of the contract. This method of competition is considered compromising to functionaries, inasmuch as the public is only too ready to suspect them of collusion with contractors; and, finally, this method of adjudicating contracts imposes enormous expense upon the competitors, and consequently reduces the number. It is said that the competition for the Antwerp Docks, the Harbour Works at Bruges and at Brussels, and a dry dock at Ostend cost to each competitor an average of 30,000 francs, and as the average number of competitors was five there was a total expense of 600,000 francs, just for the cost of the projects. Such a system stands condemned as wasteful.

In France there is now a tendency for railway companies and similar corporations to adopt what is practically the English system, of issuing bills of quantities which the competitors price, and upon which they base a lump sum contract.

This necessarily brief review of the various methods of tendering in common use in this country and abroad leads one to the conclusion that none of them are really satisfactory—some do not sufficiently protect building owners, some impose undue fetters upon the architect and contractor, some impose upon the latter an immense amount of futile labour, and most of them antagonise interests which common sense tells us ought to be closely identified. The original object of obtaining tenders is to anticipate the cost of the intended work, and so enable it to be kept within such bounds as will render the capital so invested economically remunerative.

The original object of competition was to check quotations and test the market, but it tends to become an engine to do a lot more than that, and is susceptible of abuse. What seems to be really wanted is a reliable and satisfactory method of ascertaining that prices quoted are fair to both buyer and seller, whatever the state of the market in the matter of demand and supply.

In the next article some suggestions will be offered for the improvement of existing practice.

STRIKES AND LOCK-OUTS.

THE annual volume issued by the Board of Trade on strikes and lock-outs has recently appeared, and deals with the year 1912—a year marked by the great coal strike, which alone involved some 1,000,000 workpeople and represented a loss of time amounting to 30,000,000 working days.

If this strike be eliminated from the total number of working people involved in strikes, and the number of working days lost in consequence, it still leaves 1912 with a bad record, only exceeded twice since 1903, for indirectly and directly 1,763,281 workpeople were involved in all disputes, and the total loss of working days was 38,142,101, whereas the highest record for any previous year in all disputes was in 1908, when 10,632,638 working days were lost.

The coal strike naturally prejudiced many other trades, and it is sad to record so much industrial unrest at a time of prosperity when wages were rising. The rise in rates of wages was hindered by these disputes, and only took place late in the year. As it was, the increase in rates of wages for the year was about £3,000,000; but if the same increase had extended over the twelve months the figure would have been more than doubled. Thirty-eight million working days at only half-a-crown a day represents over 4½ million pounds in money, so all disputants would do well to ponder over these figures as illustrating the direct loss to the working-classes alone by this condition of industrial warfare. Eighty-six per cent. of the disputes arose on demands for higher wages, but 10 per cent. arose in connection with trade union principles.

In the building trade 4,841 workpeople were directly involved in disputes, and 106,638 working days were lost. There were fifty-eight disputes, thirteen of which were decided in favour of the workpeople, eight in favour of the employer, and thirty-seven were compromised.

The year 1913 has not shown signs of improvement, as a larger number of disputes in all trades has been recorded in the first eight months than during the whole of any of the preceding ten years, and 7,000,000 working days have been lost. The only satisfactory feature of the present Report is that arbitration or mediation was increasingly resorted to, the number of disputes settled by this agency being the highest yet recorded. The voluntary boards and standing joint committees have also by their efforts done good work in settling disputes before stoppage of work was resorted to.

WAGES IN THE BUILDING TRADE.

BARROW-IN-FURNESS.—At a Conference held at the Victoria Park Hotel, Barrow, between the representatives of the Barrow Master Builders' Association and representatives of the Federated Building Trades Joint Committee, comprised of joiners, bricklayers, stonemasons, plasterers, and painters, convened for the purpose of endeavouring to bring to an amicable settlement the dispute then existing in the building trade, it was agreed that the wages of the various trades before mentioned shall be as follows:—Joiners, 9½d. per hour summer months, and 10d. per hour winter months. Masons, 9½d. per hour all the year round. Such rates of wages for these two trades take effect on and from January 1, 1914. Bricklayers, 10d. per hour, to take effect on and from December 1, 1913. Painters, 9½d. per hour all the year round, to take effect on and from February 2, 1914. Plasterers, 9½d. per hour all the year round, to take effect on and from April 1, 1914. The labourers have sent in a demand for an advance of 1d. per hour (7d. to 8d.).

BERWICK-ON-TWEED.—An increase of 1d. per hour has been granted to all trades in this district.

BLACKBURN.—In this district it has been a recognised custom for brick-pointing to be done occasionally by plasterers. It is reported, however, that the Bricklayers' Societies are now objecting to plasterers doing this class of work.

BOLTON.—An advance of ½d. per hour (6½d. to 7d.) will be paid to the slaters' labourers on and after November 15.

BURNLEY.—The painters have given notice for an advance in wages of 1d. per hour (8½d. to 9½d.) as from February 1, 1914.

BURY.—The National Union of Gasworkers and General Labourers are demanding a code of working rules and standard rates of wages as follows:—General labourers and yard men, 6d. per hour.; crane men, without steam, 6½d. per hour; small saw attendants, 6½d. per hour; large saw attendants, 7d. per hour; steam crane men, 7d. per hour; bricklayers' labourers, slaters' labourers, and plasterers' labourers, 7d. per hour; scaffolders, 7½d. per hour. The painters have given notice for an increase in wages of 1d. per hour (8½d. to 9½d.), to take effect from March 1, 1914.

DALKEITH.—An advance of ½d. per hour (9d. to 9½d.) has been granted to the plumbers as from November 3.

LIVERPOOL.—The following increases in the rates for machinists, sawyers, and woodturners are notified to take effect as from November 1:—(*a*) Men engaged on spindles, four-siders, tenoning machines, wood-turners and general machine hands (the latter meaning men engaged on more than one machine), ½d. per hour (10½d. to 11d.). (*b*) All other machines and men engaged on saw benches that will take a saw above 30 in. diameter, including squaring, frame, horizontal, and band saws, ½d. per hour (9½d. to 10d.). (*c*) Men engaged on saw benches that will take a saw 30 in. diameter and under, including ordinary

crosscut saws, ½d. per hour (8½d. to 9d). Men at the present time receiving more per hour than the above rates, the rate per hour they are now receiving not to be reduced.

LLANDUDNO.—The painters have given notice for an advance in wages of 1½d. per hour (7½d. to 9d.), the same to take effect on March 1, 1914.

OLDHAM.—On September 30 the wages of slaters and slaters' labourers were advanced ½d. per hour, the former from 8½d. to 9d., and the latter from 6d. to 6½d.

ST. HELENS.—The carpenters and joiners have sent in an application for an increase in wages of 1½d. per hour (9½d. to 11d.), and for an alteration of working hours, as and from May 1, 1914. The employers have replied with a counter notice for a reduction of 1½d. per hour and for an extension of the St. Helens boundary.

TODMORDEN.—The labourers of this district have formed themselves into a union and given six months' notice of a demand for an increase in wages, the minimum to be 7d. per hour.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—Plans passed:—Motor garage at the rear of 90, Queen's-road for Mrs. Brown, per Mr. Harold G. Brown; store and barking shed on the south side of Sinclair-road for Messrs. Rannie & Co., ship chandlers, per Mr. William F. M'Robb, builder; two dwelling-houses on the east side of George-street for Mr. Richard Hallglen, spirit merchant, per Mr. John Milne, architect; garage on the south side of Rosebank-terrace for Mr. William Hird, haulage contractor, per Mr. Harvey Mennie, architect; alterations and additions in connection with premises on the east side of St. Nicholas-street for Messrs. James Kinghorn & Son, drapers, per Mr. George B. Mitchell, architect; garage at the rear of 23, Westburn-drive, for Mr. James M'Lean, fish merchant, per Mr. George Watt, architect; reroofing of workshop on the west side of Summer-street for Mr. James Blake, builder, per Messrs. Wilson & Walker, architects; alterations in connection with shop, 114, Rosemount-viaduct, for the Maypole Dairy Company, Ltd., per Mr. James Wilson, shop fitter, Glasgow; picture house on the south side of Union-street for the Provincial Cinematograph Theatres, Ltd., London, per Messrs. Wilsons & Walker, architects; picture house on the north side of Union-street for Mr. Henry Ross, spirit merchant, Aberdeen, and Messrs. V. Behar & W. H. Baxter, Glasgow, per Mr. Clement George, architect.

Amersham.—Plans passed by R.D.C.:—Bungalow, Chalfont St. Peter, Mr. J. Lilley; cottage, Knotty Green, Mr. F. Perfect; two houses, Chesham Bois, Mr. W. Gomm; two houses, Chesham Bois, Messrs. Holbeche & Anderson; house, Amersham, Mr. A. Graham.

Ashford.—Plans approved:—Rebuilding of the Marlborough Hotel; house in Bond-road for Mr. W. H. Bourne; two houses in Beaver-road for Miss Pudney; shop fronts, Nos. 12 to 16, High-street, for Mr. C. Norwood; and new shop front for Messrs. J. U. Bugler, Ltd.

Atherstone.—Plans passed by R.D.C.:—House, Dordon-road, Polesworth, for Mr. C. H. Trueman; house, Potter's-lane, Polesworth, for Mr. George Cart.

Barnet.—Mr. H. P. Eames has been selected as the architect to carry out the next new batch of workmen's cottages for the U.D.C.

Belford.—The R.D.C. have passed plans for a house and shop at Seehouses for Mr. C. M. Ross, per Mr. J. Davidson.

Bentley.—The U.D.C. propose spending £700 on extending their sewage works.

Berwick-on-Tweed.—The B.G. have adopted a scheme for an addition to the Workhouse Infirmary, at a cost of £4,000.

Birmingham.—The Bluecoat School is to be transferred to a new site at Edgbaston, on which it is proposed to erect buildings, at a cost of about £50,000, to accommodate 180 boys and ninety girls.

Birstall.—Plans passed for a shop and dwelling-house in Leeds-road for Mr. B. L. Peel; and alterations at Grove Mills for Mr. W. Crowther.

Blairgowrie.—The present police buildings have been purchased in view of the proposed improvements to the public hall.

Boasley Cross.—The Devon E.C. propose erecting a new school for sixty children.

Bolsterstone.—Permission has been given by the Justices for structural alterations at the Castle Inn, Bolsterstone. The house is being enlarged to accommodate the increased population caused by the new waterworks of the Sheffield Corporation.

Bournemouth.—The T.C. have approved a scheme for erecting a concert-room on the shore end of Boscombe Pier, at a cost of £5,100, and have also favoured the adoption of plans for the widening of the landing-stage of the pier, at an estimated cost of about £7,500.

Bradford.—The L.G.B. have held an inquiry concerning an application by the Corporation for the approval of the appropriation, as a site for a temporary small-pox hospital, of 2¼ acres of land forming part of the Odsal tip lands, and for sanction to borrow £3,600 for the erection of the hospital.

Braintree.—Plans passed for the erection of three pairs of cottages by Mr. A. G. Wicks in Grenville-road; and a cottage in Roach Pond Field by Mr. W. Warren.

Brampton.—Alterations at Pavilion for Corporation Theatre Company, Ltd.; alterations to the Castle Inn for the Brampton Brewery Company.

Brandon.—Plans passed by U.D.C.:—Streets and ten cottages at Sleetburn for Messrs. Wood Brothers.

Burntwood.—The L.G.B. have held an inquiry into an application by the R.D.C. to borrow £7,160 for a sewage scheme.

Camberley.—The U.D.C. have passed a plan for a cottage for Major-General Dalrymple.

Carcroft.—A site has been secured for the proposed new Wesleyan church.

Carrickfergus.—The U.D.C. have approved of plans for the erection of new premises by Messrs. James Taylor & Sons, Ltd., at Taylor's-row.

Chatham.—Plans passed by T.C.:—Three houses at Victoria-road for Mr. W. T. Davis; horse slaughterhouse at Hook and Hatchet-road for Mr. J. T. Baker; and alterations to Frankfort House, Luton-road, for Mr. Augustus Leney.

Chesham.—The U.D.C. have now so far progressed with their scheme for working-class dwellings that plans have been prepared for the erection of twenty houses in Brockhurst-road, Chesham, one of the new roads of the town. The estimated cost is £4,141. Mr. Percy C. Dormer, the Council's Surveyor, has prepared the plans.

Chester-le-Street.—Plans have been approved by the U.D.C. for nineteen houses at South Pelaw for the N.E.R. Company; seventeen houses in George-street for Mr. Groves; and for additions to the Hermitage.

Chipping Norton.—A L.G.B. inquiry has been held in respect of the application by the T.C. for a loan of £9,400 for purposes of sewage disposal.

Clayton-le-Moors.—Plans of eight houses proposed to be erected in Scott-street by Mr. John Rd. Houldsworth approved.

Coalville.—Plans passed by U.D.C.:—Motor garage, Ashby-road, Coalville, for Messrs. Coleman & Sons; alterations to cottage, Holly Hayes, for Whitwick Granite Company, Ltd.; workshop and stores, Ellistown, for Mr. H. Blythe; storeroom, Crescent-road, Coalville, for Mr. G. Rogers; bank buildings, Belvoir-road, Coalville, for the Nottingham and Notts Bank, Ltd.; houses, Meadow-lane, Whitwick, for Mr. J. H. Adkin.

Cramond.—The Mid-Lothian C.C. have passed plans for two public conveniences.

Croston.—The R.D.C have approved of plans of alterations at cottage at Castle Bridge for Mr. Peter Buck; and also specifications of the sewering of Great-lane and Drinkhouse-lane.

Dartford.—Colonel C. N. Kidd has given a site for a vicarage for Christ Church.

Doncaster.—Plans have been prepared of the new Masonic Hall, which it is proposed to build at a cost of between £5,000 and £6,000. The site is at the corner of Priory-place and Printing Office-street, and the ground floor will be utilised for four shops.

Dorking.—The U.D.C have decided to make up Knoll-road (£1,040) and Barrington-road.

Dunfermline.—The District Committee are applying to the C.C. for sanction to spend about £150,000 on waterworks. The S.B. have decided to add a new infant department and central hall, at an estimated cost of £5,250, to the M'Lean School.

Durham County.—The C.C. have signed contracts for the erection of new schools at Station Town (cost £2,798), Etherley (£4,416), Dubmire (£2,888), and Greencroft (£10,273), and for alterations at Collierley (£6,962), Middlestone Moor (£1,084), Spennymoor North-road (£2,338). They have decided that new schools be provided at Ryton at an estimated cost of £4,794; Birtley (estimated cost, £6,238), Boldon Colliery (£3,900), and Tudhoe (£6,850), and that the Spennymoor Higher Elementary School be enlarged at an estimated cost of £3,600. They have also decided to erect a new building for the Bishop Auckland Grammar School on a site within the present playing field.

Evesham.—Plans have been passed for a stable and loft for Mr. A. Robbins in Northwich-road, Bengeworth, and for alterations to the old schools, Bengeworth.

Foleshill.—Plans passed by R.D.C.:—Two houses for Mr. E. Pearson in Jackers-lane, Foleshill; one house for Mr. Horobin at Shilton; one house for Mr. Orton in Newtown-road, Bedworth.

Glasgow.—The Architectural Inspector of the L.G.B., Edinburgh, having recently paid a visit of inspection to the Glasgow Garden Suburb at Westerton, near Canniesburn, the Secretary of the scheme (Mr. M. Boyd Auld) has now been informed by letter that the Board "have been gratified to receive from their Inspector a report commenting favourably on the developments at Westerton."

Hazel Grove.—Plans passed by R.D.C.:—Additions to house, Lees-road, Bramhall, for Mr. E. Chebble; Mr. C. Redfern, addition to house in Carwood-road, Bramhall; Mr. Wenner, addition to house, Ogden-road, Bramhall.

Hemel Hempstead.—Plans have been approved by the R.D.C. for a granary at Chipperfield for Mr. Blackwell; and alterations and additions to Boxmoor House for Mrs. Bowens.

Hemsworth.—The L.G.B. have held an inquiry into the application of the R.D.C. for

* See also our list of Competitions, Contracts, etc., on page 530.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Newcastle	10	10	10	10	9½	10	9	6½	6½	6½
Sunderland	9½	10	9½	9½	9½	9	9	6½	6½	6½
Darlington	9	9½	9	9½	9½	9	7½	6½	6½	6½
Stockton-on-Tees	9	10	9½	10	9½	9	8½	7	7	7½
Bradford	9½	9½	9	9	9½	9	8½	6½	6½	6½
Halifax	9½	9	8½	8½	8½	9	8½	6½	6½	6½
Hull	9½	9½	9½	9½	9½	9½	8½	7	7	7
Leeds	10	10	9½	9½	9	9½	8	7	7	7
Sheffield	10	9½	9½	9½	9½	9½	8	6½	6½	6½
York	9	9½	8½	9½	9½	8½	7½	6½	6½	6½
London	11½	11	11½	11½	—	1s.	9	7½	7½	7½
Brighton	8-9	8	8	—	—	—	—	—	—	—
Portsmouth	9	9	9	9	—	8	7½	6½	6½	6½
Southampton	8½	9½	9½	8	—	9½	8½	6½	6½	6½
Maidstone	9	9	9	—	—	9	7½	5½	5½	5½
Bristol	9½	9½	9½	9½	—	9½	9	6½	6½	6½
Plymouth	8½	8½	8½	8½	—	8½	7½	5½	5½	5½
Bath	7½	7½	8	8	7½	7½	7	5-5½	5-5½	5-5½
Cheltenham	8½	8½	8½	8½	—	8½	7½	5½	5½	5½
Exeter	8	8	7½	7½	7½	7½	6½	5	5	5
Gloucester	7½	8½	8½	7½	7½	8½	7½	5½	5½	5½
Hereford	7½	8	7½	8	7½	7	6½	5	5	5
Stroud	7	7	7	7	7	7	6½	4½	4½	4½
Blackburn	10	10	9½	9	9½	9½	9½	6½	7	7
Bolton	10	10½	10	10½	10	9	9	—	—	—
Liverpool	11	11	11	10	10	10	9½	6½	6½	6½
Manchester	10	10½	10½	10½	9	10	9½	6½	6½	7½
Oldham	10	10½	10	9½	9	10	9½	6	7	7½
Preston	9½	10	9½	9	8½	9	8½	5½	6	6
Birmingham	10	10	10	10½	9	10½	9	7	6	7
Derby	9½	9½	9	9	9	9	8	6	7	6½
Leicester	9½	9½	9½	10½	9	9½	8	7	7	7½
Nottingham	10	9½	9½	10	9	9½	9	7	7	7½
Norwich	8	8	8	8	8	8	6½	5	5	5
Cambridge	9	8½	8½	9	8	9	7	5½	5½	5½
Oxford	9	8	8½	8½	8	8½	7	6	6	6
Southend	9	9	9	9	Piece work	9	7	6	6	6
St. Albans	9	9	9	10	8½	9	8	6	6	6
Grays	—	10	10	—	9½	—	8½	7	7	7
Cardiff	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Swansea	9	9	9	9	8½	9	8½	6	6	6
Newport	9	9	9	9	8½	8½	8½	6	6	6
Chatham	8	9	9	8½	9	8½	7	5½	5½	5½
Birkenhead	11	11	11	10½	10	9½	9½	6½	6½	6½

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

sanction to borrow £5,636 for the extension of the sewage works at South Elmsall.

Hertford.—Plans passed by R.D.C.:—Bungalow at Hertford Heath for Mr. Brace; additions to Panshanger House for Lord Desborough; and a pumping-station for Mr. Otto Beit at Tewin Water.

Hessle.—The U.D.C. are asking sanction for a loan of £1,000 for the erection of six working-class dwellings.

Howth.—The L.G.B. have held an inquiry with reference to an application by the North Dublin R.D.C. for sanction of a loan of £3,250 for carrying out additional sewerage and water-works at Howth.

Huddersfield.—An inquiry has been held by the L.G.B. into the application of the T.C. to borrow £96,973 for the erection of working-class dwellings. The scheme includes the provision of 200 houses on the Royds Wood Estate, forty-eight at Salendine Nook, fifty at Bradley, house at Woodfield, Lockwood twenty at Highroyd, Moldgreen, and three three-storied blocks of twelve houses each in Kirkgate. It is also proposed to purchase the Hollin Carr Estate, but it is not intended to use the land immediately for building purposes. At the inquiry the Borough Engineer, Mr. K. F. Campbell, said it was proposed to use artificial stone in the erection of the Salendine Nook, Highroyd, and Bradley properties. He estimated that there would be a net saving of 20 per cent. in the use of artificial stone as against local stone.

Islington.—The B.C. have approved of the amended plans for the South-East Branch Library.

Kirkham.—The Governors of the Grammar School have sold a site in Orders-lane for a cotton mill.

Lanarkshire.—Plans passed:—Mr. George Rattray, Muirhead, per Messrs. Lennox & MacMath, Glasgow, alteration of tenement, Station-road, Muirhead; Miss E. D. Gillespie, per Mr. Norman G. Allan, Cathcart-road, Glasgow, additions and alteration at Maple Bank Cottage, Millerston; the Rev. T. M. R. Younghusbes, per Mr. Henry D. Walton, West Campbell-street, Glasgow, church, east side of Lochend-road, Gartcosh; the 35th Glasgow Troop Boy Scouts, per Mr. Henry Mackay, Mount Vernon, Boy Scouts' Hall, off Gartocher-terrace-road, Shettleston.

Lichfield.—The T.C. have decided to apply to the L.G.B. for sanction to borrow £3,760 for alterations to the Guildhall, and the conversion of the house adjoining into a Council-chamber and municipal offices, and to borrow £300 for the erection of a mortuary and fever van shed in the rear in Wade-street.

Lincoln.—Plans passed by T.C.:—Mr. R. L. Holland, two houses, Newland-street West, and house, West-parade; Rev. R. Echalez, house, Queensway; Clarke's Crank and Forge Company, Ltd., landing shop and messroom, Coulthams-street.

Littlehampton.—Plans for the lay-out of the new recreation-ground and the erection of a pavilion by the U.D.C. (£1,000) are to be sent to the L.G.B. for approval.

London C.C.—Plans passed by Building Act Committee:—Lines of frontage: Erection of building on site abutting on Highbury-crescent and Holloway-road, Islington, for Temperance Billiard Halls, Ltd.; addition at 36, Crouch-hill, Islington, for Messrs. A. Sprosson & Co., on behalf of Mr. C. E. Roberts; iron and glass shelter at Richelieu Hotel, Oxford-street, on the application of Messrs. Hukins & Mayell; porches to fourteen houses on north side of Broadwater-road, Tooting, for Messrs. Stevens & Gregson; houses on north side of Woodbourne-avenue, Streatham, on application of Messrs. Chapel & Utting. Width of way: Addition to 2, Brunswick-mews, Westbourne-grove, on application of Mr. R. S. Powell, for Mr. R. E. Bartley; building on east side of Hungerford-street, Commercial-road, on the application of Messrs. Lovegrove & Papworth, for the County Chemical Company; porch and conservatory at "The Lawn," Hampstead Heath, on the application of Mr. W. Hervey, for Mr. T. J. Barratt; oriel window, etc., at 17, Balfour-mews, Mayfair, on the application of Messrs. Stanley, Barrett, & Driver, for the Messrs. Leith; erection of buildings on north side of Upper Kennington-lane for Mr. G. Bartlett. Space at rear: Shop at rear of 205, Rushey-green, Catford, on the application of Messrs. Norfolk & Prior, for Mr. C. Santer. Formation of streets: Formation of two ways of 8 ft. wide at rear of shops at Brixton-hill on behalf of the Evans Construction Syndicate, Ltd.; two streets for carriage traffic at Norwood, on the application of Messrs. R. Ellis & Sons, for Mr. R. A. Sanders, M.P. Consent to the application of Messrs. Joseph & Smithem to erect blocks of dwelling-houses on the southern side of Warner-road, Camberwell; additional cubical extent in respect of alterations at 154, High-road, Kilburn, on the application of Mr. G. A. Sexton, for Messrs. B. B. Evans & Co. The Council has agreed to let on lease for ninety-nine years to the Kingsway Offices Company, Ltd., a site at the junction of Kingsway and Aldwych at a rent of £2,270 a year (area, 9,000 sq. ft.). The Improvements Committee have approved of the plans of the buildings proposed to be erected by the Hon. Charles Bateman Hanbury on a site in Millbank, and also the plans for the buildings proposed to be erected by Messrs. King & Arnell, Ltd., on a site between Kingsway and Keen-street.

Malling.—Plans approved by R.D.C.:—Four cottages at Burham Court Farm, Burham, for the Associated Portland Cement Company, Ltd.; addition to Ivy Farm, East Malling, for Mr. H. G. Roberts; house at Offham for Major Nicholson; addition to two cottages at East Peckham for Mr. Hilder; addition to factory at Snodland for Snodland Lead Wool Company; addition to four cottages at St. Leonard's-street for Mr. H. J. Wood.

Market Drayton.—The Shropshire C.C. have decided to add rooms to the Grammar School at a cost of £800.

Marple.—Mr. T. West, builder, of Cheadle Hulme, proposes building a number of houses in Cross-lane.

Melton Mowbray.—Plans have been passed for a Salvation Army hall in Pall-mall.

Mundesley.—Restoration of chancel of church. Messrs. Lacey & Upcher, architects, Norwich.

Newport (Mon.).—The British Mannesmann Tube Company have provisionally selected Newport for their new works.

Northampton.—Amended plans are to be drawn up for the proposed Corporation baths at the back of the Library.

North Tidsworth.—The Wilts E.C. contemplate building a school for seventy children.

Nuneaton.—Plans for alterations to two houses at Smorrell-lane, Bedworth, for the Newdigate Colliery Company have been approved.

Oldbury.—A sub-committee of the Council has been appointed to consider the question of baths, for the cost of which a gentleman some time ago offered £4,000.

Oldham.—Plans passed:—Conversion of houses in Albert-street for Mr. G. H. Bracewell; motor garage, house, and shop, Oldham-road, for Mr. J. H. Wilson; picture palace, Whittaker-street, for Mr. W. Openshaw.

Paisley.—The Dean of Guild Court have granted the application of the trustees of Paisley Art Institute to erect a new art gallery and take down the existing outhouses and erect new outhouses.

Pilling.—Mr. J. B. Thornley, of Darwen, has been appointed architect for the proposed new Wesleyan school which is to be erected at Pilling. It is estimated that the cost of the new buildings will be close on £1,000.

Poole.—A faculty to enable the work of rebuilding the nave of the Longfleet St. Mary's Church has been applied for, and the committee hope to commence building operations at once.

Portessie.—The Rathven School Board are discussing the building of a new school at an estimated cost of £3,500.

Reigate.—Plans passed:—Additions to house, Church-hill, Merstham (Mr. F. F. Bridgewater, "Uplands," Merstham); house, Sandlands-road, Walton-on-the-Hill (Mr J. Bridgland, Walton); house, Sandlands-road, Walton-on-the-Hill (Mr. John Oliver, "Sandlands," Walton); house, Sandlands-grove, Walton-on-the-Hill (Mr. John Oliver); and additions to a house, Meath Green-lane, Horley (Mr. D. H. Roddick, Meath Green-lane, Horley).

Richmond (Yorkshire).—The R.D.C. have passed plans for a new Wesleyan church at Colburn.

Rickmansworth.—Plans approved by U.D.C.:—Pair of villas, Cedars-avenue, for Mr. Harold Griffiths; rebuilding of the White Bear, Batchworth, for Messrs. Salter & Co.; two pairs cottages, Yorke-road for Mr. G. H. Coleman.

Romford.—Plans of four houses in Hornchurch-road for Mr. H. E. Rushen and of two houses in The Crossway for the Gidea Park Company have been disapproved by the T.C.

Rugeley.—Plans have been passed for three new cottages to be erected in Tory-row for Mrs. Whittingham.

St. Annes.—Plans for eight cottages approved for Mr. J. H. Sharp in St. David's-road, N.

Seaham Harbour.—The L.G.B. have held an inquiry into the application of the U.D.C. for sanction to borrow £9,577 for the purchase of land and the erection of forty-five working-class dwellings.

Sedgefield.—Plans passed for two houses at Fishburn for Mr. Davison.

Selby.—The U.D.C. have decided to build a further batch of thirty-nine houses for the working classes from plans prepared by Mr. Bruce McGregor Gray, their Engineer and Surveyor.

Sheffield.—The L.G.B. have held an inquiry into the application of the City Council for the following loans:—Paving in Holme-lane, Loxley-road, Main-road, and Sheffield-road, £19,993; railway siding at Stevenson-road, £2,000; freehold of Broomhill Police-station and Highway Depôt, Spooner-road, £400; gymnastic apparatus for parks and recreation grounds, £750; alterations and improvements at Attercliffe Baths, £3,080; land in Staniforth-road, Rushby-street, and Crookes for baths, £3,270; bowling greens at Whiteley and Tinsley, £350.

Shelf.—The U.D.C. have approved of plans for a cottage at the sanatorium, also additions to existing cottage and proposed new drainage, for the Huddersfield T.C.

Shipston.—The L.G.B. have held an inquiry into an application by the R.D.C. for sanction to borrow £5,300 for purposes of sewerage and sewage disposal for the parish of Shipston-on-Stour, including the execution of works in the parish of Honington.

Southend.—The T.C. have decided to improve the accommodation at the south tramway station at a cost of £2,175.

Spilsby.—Plans passed by R.D.C.:—Additions to Neptune House, Sutton, for Mr. Spurway; alterations to Brewery House, Hundleby, for the Hundleby Brewery Company; aterations to shop windows for Mr. Ranby, Burgh; and house for Mr. Beans, Station-road, Sutton.

Stone.—The R.D.C. are desirous of borrowing £2,300 for a sewerage scheme for Rough Close, and the L.G.B. have held an inquiry.

Sunderland.—The T.C. have appointed a sub-committee to go into the question of the proposed extension of the Town Hall.

Swansea.—Plans passed by R.D.C.:—Messrs. T. J. & Daniel Evans, Stafford Common, Gowerton, two houses; Mr. Jos. E. Thomas, off Sterry-road, Gowerton, one house; Mr. Lewis Davies, Park-row, Gorseinon, six houses; Mr. Lewis Davies, Alexandra-road, Gorseinon, two houses; Mr. Morgan Jones, Ffosyfetail-road, Pontardulais, one house; Mrs. Mary Ann Jones, Swansea-road, Pontardulais, alterations and additions; Mr. Joseph Hopkins, Loulas, Llansamlet, two houses; Mr. Benjamin Morgan, Trallwn, Llansamlet, extensions to house; Mr. F. C. Stadden, Church-road, Llansamlet, billiard-room; Mr. J. E. Stevens, Mason's-road, Gorseinon, turning five houses into shops.

Teignmouth.—The U.D.C. have decided to apply to the L.G.B. for sanction to a loan of £1,450 in connection with the sea defence works.

Thedwastre.—The L.G.B. have sanctioned the R.D.C. building cottages at Rattlesden.

Tonbridge.—The South-Eastern and Chatham Railway Company are contemplating carrying out improvements at the station.

Torquay.—The Surveyor of the T.C. has been instructed to prepare an estimate for a cliff railway from Babbacombe Down to Oddicombe Beach.

Uttoxeter.—The L.G.B. have held an inquiry into the application of the local authority to borrow £600 for improving the Town Hall.

Wandsworth.—The B.C. are considering a scheme for the widening and improving of the southern approach to Wandsworth Bridge at an estimated cost of £34,350.

Ware.—Plans passed:—Additions to Hailey Cottage, Hailey-lane, for Colonel C. Young, and new house at Hertford Heath for Mr. Ellis.

Watford.—Plans approved by U.D.C.:—New house, Rickmansworth-road, for Mr. H. Young; new stabling and drainage, Orphanage-road, for London and North-Western Railway Company; outbuildings and drainage, 101-123, Lower Paddock-road, for Mr. Brown; additions, 14, Canterbury-road, for Mr. A. B. Seymour; eight houses, Parkgate-road, for Mr. J. Bonham; new workshop, rear of 49, Queen's-road, for Mr. W. J. Elliott. The plan for new roads and sewers, Cassiobury Park Estate, for Messrs. Ashby & Brightman, have been disapproved. The R.D.C. have passed plans for a pair of villas in Crossbath, Radlett, for Mr. J. Toyer, and a house at Radlett for Mr. T. A. Richardson.

Yeovil.—The Board of Education have approved plans for new schools, subject to certain alterations, which Mr. Warren, the architect, will carry out.

Yiewdsley.—Two villas for Mr. H. F. Bateman in St. Stephen's-road.

York.—Plans approved:—Messrs. McLaren & Co., eight houses, Chestnut-avenue; Mr. G. R. Douglas, house, Falsgrave-crescent; Trustees, St. Peter's School, additions and alterations, Clifton-grove, Clifton; Mrs. Milner, scullery, 128, The Mount; Mrs. Treasure, house, Chestnut-avenue; Mr. G. E. Moyser, conversion of one house into two, 36, Monkgate; Mr. J. W. Cooper, house, St. Clement's-grove; N.E. Railway Company, bathroom, 176, Holgate-road; Nursing Home Committee, nursing home, Precentor's Court.

GENERAL BUILDING NEWS.

HOLY TRINITY CHURCH, BARNES.

A new chancel, transepts, and vestry are being added to this church. The architect is Mr. Noël A. New, Great Berkhamsted, who has designed a new reredos also. The walls of the church are faced with Kentish rag externally and plastered internally, the dressings and piers being of Monk's Park stone. The chancel ceiling is of the barrel type, formed in plaster with wooden ribs treated with brown Solignum. The roofs are covered with thick Delabole slates. Robin Hood stone has been used for the steps, by which the new chancel is approached from the nave, polished Devonshire marble forms the sanctuary and altar steps, while the floors of the chancel and sanctuary are of white marble terrazzo with a narrow black border. The general contractors are Messrs. Joseph Dorey & Co., Ltd., Brentford, and the marble-work is by Messrs. A. W. Blackler & Sons, Torquay. The heating is by Messrs. R. J. Pearson & Co. Messrs. H. & J. Matthews, of Berkhamsted, have made the oak reredos, the carving being by Miss G. White, of Hemel Hempstead, and the illuminating, etc., by Mr. W. M. Whitehead, Great Berkhamsted. The figures are by Messrs. J. A. Oor & Son, Roermond, Holland.

ST. GEORGE'S CHURCH, BENENDEN, KENT.

The ancient chapel at the east end of the south aisle of St. George's Church, Benenden, has during the last three months been undergoing restoration. The Viscountess Goschen lately offered to restore the chapel as a memorial to her sisters. Mr. Geo. H. Fellowes Prynne, F.R.I.B.A., of Westminster, was consulted, and prepared the necessary designs for the restoration. The old seats have been removed and the chapel has been refloored to its original levels. The new communicants' and altar steps are of white Sicilian marble, and the paving of the sanctuary is of polished light and dark green, grey, and white marble. The central passage is of similar material, while the flooring under the chairs, now facing east, is formed of oak blocks. An inlaid and polished marble altar is placed in a central position under the east window, and is surmounted by a blue and gold damask dossal and hangings. The lower part of the walls are covered with carved oak panelling, and oak parclose screens fill the two arches between the chapel and the chancel. Oak clergy stalls are placed on either side of the sanctuary. The oak work throughout has been carried out by Messrs. H. H. Martyn & Co., of Cheltenham, and the marble

work by Mr. H. C. Tanner, of Campbell-road, Hanwell.

COUNCIL SCHOOL, TUMBLE.

This new school has been erected from the designs of the County Architect, Mr. W. V. Morgan. Accommodation is provided for 300 children, and the cost of the work was £4,000, the contract being executed by Mr. Thomas Morgan.

PARISH HALL, BROCKLEY, S.E.

In connection with St. Saviour's Church, Brockley Rise a Parish Hall is being erected from the design, chosen in a limited competition, of Mr. G. M. Silley, Craven-street, Strand. The builders are Messrs. Thompson & Beveridge, Brown-street, Bryanston-square, W.

MOORGATE HALL, FINSBURY.

Demolitions and excavations are in progress in Finsbury-pavement, E.C., and Moorfields, where Moorgate Hall will be erected eventually from the designs of Messrs. Richardson & Gill, Russell-square. Moorgate Hall will have a frontage of about 220 ft. to Finsbury-pavement, and the same to Moorfields, with a height of about 80 ft. to the cornice. It will consist of shops and offices, which, by reason of the advantages of site, will be lighted exceptionally well. It will be a simple building, with large windows and without heavy projecting cornices, while the interior, especially the staircase, will possess some unusual features. The site adjoins the Moorgate-street Station on the Underground.

BUSINESS PREMISES, RED LION-SQUARE.

Kinofilms House, 6 and 7, Red Lion-square, and 56, 57, Eagle-street, is approaching completion. It has been specially constructed for the purposes of manufacturing and testing films for cinematograph theatres. The architects are Messrs. Bourchier, Burmester, & Galsworthy, Queen Anne's-gate, Westminster, and the general contractor is Mr. W. F. Revill, Hampton-hill. Messrs. D. G. Somerville & Co., Ltd., Victoria-street, S.W., have been responsible for the steelwork, and the electrical engineers are Messrs. E. P. Allam & Co., Gray's Inn-road, W.C.

NEW FARM COLONY, ROYAL ALBERT INSTITUTION, LANCASTER.

This new colony has been established to train feeble-minded boys of the northern counties in agriculture and kindred pursuits, and was opened on October 21. The buildings are built of local stone rubble walling, with fine tooled dressings, the internal walls being of brick, and the roof slated. The accommodation is as follows, viz.:—On the ground floor vestibule and entrance hall, with reception-room and lavatories to the right of same, and day-room to the left. Adjacent to this room is the kitchen department, with large scullery, storerooms, larders, etc., and complete modern cooking installation. On the first floor, which is approached from the hall by a stone staircase, there is the following accommodation, viz.:—Landing, with large dormitory to left of same, containing forty beds, with proper provision for escape in case of panic or fire by means of an iron staircase leading directly down to the grounds. On the opposite side of the landing are attendants' rooms, with observation windows into dormitory, also bathrooms, lavatories, etc. Additional storerooms for clothes, etc., are provided on a second floor, and in the basement are situated heating chambers and fuel stores. The kitchen department is paved with red adamantine tiles, and the sanitary department, etc., with "Samz" jointless flooring. The heating and domestic hot-water supply and fire-hydrant system have been executed by Messrs. Seward & Co., of Lancaster; grates and mantelpieces by Mr. E. A. Clark, Liverpool; fire-escape staircase and boundary railings by Messrs. Peake & Son, Liverpool; verandah and patent glazing by Messrs. Mellowes & Co., Sheffield; and electrical installation by Parkinson, of Lancaster. The general contractors for the works were as follows, viz.:—Brickwork, masonry, and joinery, Messrs. Thompson & Morris; plastering, Messrs. T. Cross & Son; plumbing and glazing, Mr. R. P. Wilson; and painting, Messrs. Eaton & Bulfield. Mr. F. W. Leach was the clerk of works, and the buildings were designed, and their construction supervised, by Messrs. Woolfall & Eccles, FF.R.I.B.A., of Castle-street, Liverpool.

GOVERNMENT HOUSE, E.C.

The old buildings at the corner of Newgate-street and Warwick-lane are being demolished by Messrs. Hinton Brothers, Barking-road, E., and on the site will be built business premises to be known as Government House. The architect is Mr. Paul Hoffmann, Capel House, New Broad-street, E.C. There will be a frontage of 157 ft. to Newgate-street and 39 ft. to Warwick-lane.

OFFICES, ETC., BISHOPSGATE.

Shops and offices have been erected at 302-4, Bishopsgate, from the designs of Mr. F. Selby, Chancery-lane. The builders were Messrs. Todd & Newman, Hackney, the steel work by Messrs. Dorman, Long, & Co., Middlesbrough, and the window fittings by Messrs. Henry Hope & Sons, Ltd., Berners-street, and Birmingham.

MANSION, ROEHAMPTON, S.W.

Extensive alterations and additions are being made for the Duchess of Sutherland to a mansion at Roehampton. Mr. F. S. Chesterton, 150, Cheapside, E.C., who designed the original building, is the architect, and the general contractors are Messrs. James Smith & Sons, Ltd., South Norwood. The marble-work is by Messrs. Fenning & Co., Ltd., Hammersmith; the electric lighting is by Messrs. Cecil Cooper & Co., Gloucester-road, Kensington; the heating is by Messrs. Richard Crittall & Co., Ltd., Wardour-street; and the sanitary work by Messrs. Pontifex & Co.

CHRIST'S HOSPITAL, E.C.

Since the removal of Christ's Hospital from Newgate-street to Horsham the offices of the school have been in Aldersgate-street, but a new building for the purpose will be erected shortly in Great Tower-street and Water-lane, E.C. The architects are Sir Arthur Blomfield & Sons, Montagu-place, W., and the contract has been let to Messrs. Howell J. Williams, Ltd., Bermondsey.

THE PEOPLE'S PALACE, E.

A chemical laboratory is in course of construction in connection with the East London College (the People's Palace), Mile End-road, E. The architect is Mr. P. G. Silley, Craven-street, Strand, who is acting for the Drapers' Company. Messrs. Ashby & Horner, Aldgate, are the general contractors, and the steelwork is by Messrs. Homan & Rodgers, the Vauxhall Steel Wharf.

CLARE TOWN HALL.

This new building has been erected in commemoration of the Coronation of King George V., and was designed by Mr. P. M. Beaumont, architect, of Maldon. The hall has seating accommodation for 300 people, and other rooms are provided for various meetings of the Council. The estimated cost of the work was £1,317, and the contract was carried out by Messrs. G. Grimwood & Sons, of Sudbury.

MASONIC TEMPLE, LOSSIEMOUTH.

Mr. R. B. Pratt, of Elgin, is the architect for this new building which is being erected on a site in James-street. The building is to cost about £750.

PUBLIC HALL, RESTALRIG.

A new building, which will be used both as a public hall and a church, has recently been erected at Restalrig. The cost of the building is £1,400, and the seating accommodation is for about 350 people. The architect was Mr. M'Niven, and the contractors Messrs. D. & W. Anderson.

BUILDING AT BRENTWOOD.

A new infants' school has been erected in New-road, Brentwood, to provide accommodation for 220 children. The plans were prepared by Mr. A. T. G. Wood, architect, and the contract was executed by Mr. F. W. Jarvis.

TRADE NEWS.

The Amberley Roman Catholic Schools, Sussex, are being warmed by means of Shorland's patent Manchester stoves, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester; and the Helmington Row Hospital, Co. Durham, is being supplied with the firm's double-fronted patent Manchester stoves with descending smoke flues, patent Manchester grates, patent exhaust roof, and special inlet ventilators.

A motor fire apparatus is to be provided for Wembley, the type selected being the Merryweather "Hatfield" fire-engine, which will be fitted with a new design of pump. This design has been introduced by the makers to meet the increasing demand for a petrol motor pump of rather less capacity than usually adopted, in order to suit the needs of small towns and country districts. The pumping capacity will be 250 to 300 gallons per minute, and, in addition to ample accommodation for hose and gear, a fire escape will be carried. Arrangements will also be made for the pump to throw a first-aid jet for dealing with small fires, so that the machine will embody a complete fire-extinguishing and fire-escape equipment on one chassis.

The "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air-inlets, has been applied to Fusehill Workhouse, Carlisle.

The clerk of works to the Earl of Hopetoun is using Pudlo for the floors of the greenhouse cellars at Hopetoun, Queensferry. Pudlo has also been used successfully on a swimming-bath at the Kendal Grammar School.

DURHAM CITY SEWAGE DISPOSAL.

The Local Government Board have sanctioned a loan for providing a screening and dredging apparatus at the new sewage works. When this apparatus is installed these works will be one of the most modern and up-to-date sewage disposal works in the Northern Counties. Tenders are to be invited at an early date. The engineers are Messrs. Taylor & Wallin, of Newcastle-upon-Tyne.

"ADVANCE INFORMATION."

"Advance Information" (concerning building and contracting) is the title of a publication issued five times a week in the interests of those to whom the earliest news of projected buildings, etc., is of value. Mr. E. M. Kirwan, a Fleet-street journalist, is chiefly responsible for the new enterprise. The offices are at 5, The Broadway, E.C., and the subscription post paid is one guinea per quarter. We show our sense of the value of such news by giving it in full ourselves!

NEW BUILDING FOR THE HEARTS OF OAK SOCIETY.

Messrs. Foster & Dicksee have been awarded the contract for the new wing which is to be erected as an addition to the existing building. The full list of tenders for the work will be given in our next issue.

WESTMINSTER CITY COUNCIL.

AT the fortnightly sitting of the Westminster City Council on November 6 the following matters were dealt with:—

Building in Argyll-place.—An application was received from the Union of London and Smith's Bank for permission to build over the vacant area of land adjoining their premises in Argyll-place, in consideration of which the applicants were prepared to pay £4,000 to the Council, to be devoted to street improvements. It was decided to accede to the application and allow of the closing of that part of the highway affected.

Park-street.—Messrs. J. Morris & Son, of 81, Park-street, wrote, enclosing plans of proposed new buildings at the corner of Park-street and Wood-mews, showing a give-and-take proposal in regard to the building line, and the application was acceded to.

Mall Extension Improvement.—A letter from the London County Council was received in regard to the Mall to Charing Cross improvement, and it was suggested that a Bill to carry the scheme should be promoted by the Government rather than by the County Council. It was agreed that the services of the City Council's officers should be placed at the disposal of the First Commissioner of Works if they were required.

Mr. W. Woodward, F.R.I.B.A., expressed the hope that the scheme would soon get from paper to bricks and mortar, for if they delayed matters the public would get impatient.

Capt. Jessel, M.P., hoped a comprehensive scheme would be prepared which would include the removal of the statue of King Charles, which, he said, although one of the most beautiful statues in London, obstructed the roadway in its present position, and spoiled the approach to the Mall.

The questions raised were referred to the Committee concerned.

FOREIGN AND COLONIAL.

Building and Furnishing Materials for Lunatic Asylum, Netherlands.

The *Nederlandsche Staatscourant* (The Hague) of November 3 notifies that tenders will be opened by the Provincial Authorities of Noordbrabant, Hertogenbosch, on November 28, for the erection of a lunatic asylum in the communal district of Woensel. The upset price is put at 990,000 gulden (£82,500). Although the foregoing contract will in all probability be awarded to a Netherlands firm, nevertheless the carying out of the work may involve the purchase of some materials outside the Netherlands.

Hotel Equipment, Panama.

With reference to the notice on p. 616 of the *Board of Trade Journal* of September 11 relative to the proposed construction of a large private hotel in Panama City, H.M. Consul at Colon (Mr. H. O. Chalkley) reports that one of the promoters of the scheme is now in England for the purpose of raising the necessary capital. The name and address of the promoter may be obtained by United

Kingdom manufacturers of hotel equipment at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Window-Glass Industry, Belgium.

The *Frankfurter Zeitung* of October 28 states that, owing to the recent falling off in the demand for window glass, the Belgian Window Glass Makers' Syndicate has been obliged to curtail considerably its output, which a few months back was put at 36,000,000 sq. ft. Consequently, this year's production may now be reckoned at about 30,000,000 sq. ft. At the moment the demand may be described as normally active, especially for foreign account, so that it is hoped there will be no need to take any steps towards the further limitation of production, the more so as it is anticipated that the new American customs tariff will have the effect of stimulating exports of window glass from European countries to the United States. As regards the Belgian export market, the trade with Japan has recently improved, and the orders from Argentina, Australia, and Canada are better than last year's; but there is a falling off in the trade with the United Kingdom and Eastern Asia.

PATENTS.

APPLICATIONS PUBLISHED.*

17,106 of 1912.—Patrick Molloy: Reinforced concrete fencing and the like.

20,584 of 1912.—John Robert Brunton: Chimney-pots and ventilating-shaft tops.

23,434 of 1912.—Joseph Sosa: Hinges.

24,128 of 1912.—Vincent Cartwright Vickers: Door latches.

26,757 of 1912.—John Irving Kirby: Siphonic flushing cisterns.

27,811 of 1912.—James Stanley: Building lights.

28,276 of 1912.—David Boswell Donald and Alexander Wilson: Abrasive wheels for sawing marble, stone, or the like.

1,349 of 1913.—Alfred Clark: Means for preventing choking of the boiler flues of kitchen-ranges.

2,031 of 1913.—Harold Herbert Hancock: Apparatus for heating and ventilating buildings and the like.

2,328 of 1913.—William Beasley Heap: Walls, partitions, and the like.

2,537 of 1913.—Arthur Reginald Groome: Draughts, dust, and weather excluders for doors, windows, and the like.

4,316 of 1913.—Peter Fyfe: Discharge fittings of water-closet basins.

7,564 of 1913.—Edmund Herbert Banks: Double-door latches.

10,445 of 1913.—Edgard Frankignoul: Process of and means for constructing foundation walls, quay walls, and the like, by means of concrete sheet-piles.

11,349 of 1913.—Charles Edward Percy Gabriel: Locks for sliding doors, shutters, gates, and the like.

15,057 of 1913.—Peter Mathias Wickstrum: Weather strips for doors.

17,823 of 1913.—Thomas Robinson: Flushing apparatus.

TRADE CATALOGUES.

We have received from the Improved Wood Pavement Company, Ltd., of 46, Queen Victoria-street, London, E.C., a booklet describing and illustrating their widely-used creosoted deal paving. Originally intended as a noiseless pavement, creosoted deal paving has come to be recognised as one of the most economical forms of street paving. Users of the London streets know by experience the superior wearing properties of deal paving as compared with hardwood, which in process of time becomes unevenly fitted and a constant source of injury to wheels and springs. Ample testimony of the advantages of soft wood-paving is given in the annual reports of the Metropolitan Committee on materials and means of paving the streets of London, from which we extract the following:—"In Notting Hill-gate the wood-paving (creosoted deal), which this paving (creosoted deal) replaced, had been down twelve years, and in residential thoroughfares the paving replaced wood-paving which had been laid from sixteen to twenty years previously." In Putney High-street the paving lasted seventeen years, and the opinion is given that "the soft wood blocks wear uniformly . . . the hardwood blocks wear unequally at the edges, producing an uneven and cobbly surface." The firm introduced their system of wood-paving in 1872, and have since laid the pavements of the greater number of the principal trunk routes of London.

We have received from the Buckley Floor Polish Company, of Daven Hill, Levenshulme, Manchester, some particulars of their polishes for the treatment of floors, which are specially recommended for the maintenance of wood blocks, parquet, composition, or linoleum covered floor. It is claimed that the Buckley floor polish is sanitary, antiseptic, cheap in initial cost, economical in maintenance, and pleasing in appearance. In the descriptive pamphlet which we have received some interesting testimonials are given from those who have used the polish, while illustrations are shown from which a good idea can be obtained of the results of the treatment. At the South Manchester union workhouse about 30,000 square yards of floor were treated with the material.

The British Ceresit Waterproofing Company, Ltd., of 68, Victoria-street, London, S.W., forward us a booklet dealing with the use of Ceresit in all building operations. Photographs are given of many important buildings in which Ceresit has been employed, among which we notice the new building for the Royal Society of Medicine, Cavendish-square, London, W., and the new Liver Building, Liverpool, where the basements have been treated with Ceresit rendering; swimming-baths at Cheadle Hulme, near Manchester, and reservoirs at Carisbrooke and East Cowes, waterproofed with Ceresit; and the Monroe Building, Chicago, the reinforced concrete foundations of which have been treated with Ceresit. Many other examples of its use, including many contracts on the Continent and in Canada, are also illustrated.

*All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Cobb, Chairman, presiding.

Piccadilly Improvements.—The Improvements Committee recommended that Parliamentary powers should be sought next year for authority to widen Piccadilly between St. James's-street and the Green Park.

Tenders.—Tenders were received for re-drainage works, etc., at Netherwood-street School, Hampstead; also for fixing hot-water heating apparatus at Popham-road School, Islington, N.

New School.—It is proposed to erect an elementary school for 868 children on a site in Sebbon-street, Islington, and plans have been approved of a three-story building, together with a combined cookery and laundry centre.

Generating Station.—The Highways Committee recommend that extensions and alterations of the plant at the Greenwich Generating Station be carried out by direct employment of labour, under the direction of the Committee.

Theatres, etc.—The Theatres and Music Halls Committee have approved of the following drawings:—75, Balham High-road—alterations to cinematograph hall; Dulwich-road and Railton-road—lighting arrangements at cinematograph hall; 411-13, Edgware-road—electrical arrangements at cinematograph hall; Glasshouse-street (proposed hotel)—heating and ventilating arrangements; 253-5, Goldhawk-road—alterations to cinematograph hall; 324, Harrow-road—heating and ventilating arrangements; Haymarket Theatre—alterations at dress circle level; Holborn Empire, High Holborn—alterations to cinematograph enclosure, and extractor fan in main ceiling; 197, Kentish Town-road—ventilating arrangements at proposed cinematograph hall; 103-7, Kingsland High-street—arrangements for complying with the conditions of approval of proposed extension of cinematograph hall; London Hippodrome—provision of a moulded dado to the gallery and the staircase, from the vestibule to the dress circle; 121, Lordship-lane—ventilating arrangements at cinematograph hall; 274-80, New North-road—alteration and enlargement of cinematograph hall; Oxford-street (Electric Pavilion)—electrical arrangements; Pinoli's Restaurant, Wardour-street—proposed alterations; Sadler's Wells Theatre—provision of a cinematograph enclosure above the gallery level; Sangley-road, Catford (Central Hall Picture Palace)—specification of electrical installation; 83-86, Upper-street, Islington—drawing and specification of the hot-water system; Wells-street, Camberwell (proposed cinematograph hall)—specification and schedule of proposed electrical installation.

THE SURVEYORS' INSTITUTION.

THE opening meeting of the new session of the Surveyors' Institution was held on Monday at No. 12, Great George-street, Westminster, S.W., when Mr. W. Edward Woolley (President) delivered an address. From the address, which dealt in the main with the land, we take the following:—

"The housing question is greatly complicated by the large increase in the cost of materials and labour which has taken place during the past generation. Apart altogether from the value of the land, most surveyors will, I think, bear me out in saying that a pair of five-roomed cottages, with fencing, water supply, and conveniences, cannot be built now for less than £400, and would have to be let at from 3s. 6d. to 4s. a week each in order to secure even 4 per cent. on the capital expended. Clearly, then, except so far as they are a necessary part of the equipment of the farm or estate, there is little inducement to choose the erection of cottages in rural districts as a direct form of investment.

But the subject is too wide a one for me to attempt to follow through its many ramifications in the time at my disposal, and I therefore venture to submit the following broad principles for your consideration:—

1. Housing in rural districts should primarily be a matter for the landowner, on whom might be imposed the duty of providing at his own cost a sufficiency of houses to accommodate the labourers and others regularly employed on his estate. A similar responsibility should be placed in such districts upon railway companies, county councils, and other similar employers of labour.

2. If there is a demand for houses beyond the above the landowner, if willing to provide them, should have facilities afforded him for obtaining the use of cheap money. In such cases proper conditions as to the maximum rents to be charged and the extent of the gardens should be enforced.

3. As the provision of garden ground does something to overcome the difficulty of obtaining an adequate return on the cost of building, labourers' cottages, provided by such means, should have from an eighth to a quarter of an acre of land either adjoining or near to.

4. Although, even with the advantage of cheap money, the standard of rents in rural districts would seldom permit the erection of cottages to be remunerative, I believe that landowners would usually be found willing to meet any demand which might exist; and indeed they are in the better position to do so as they have the less need to consider the value or cost of the sites. Should, however, they object to do more than provide the accommodation necessary for their own and their tenants' employees, the duty of providing the extra accommodation needed should be thrown upon the local authority.

5. In such cases some inexpensive method should be devised for enabling the local authority to obtain the sites required, if necessary by compulsion. And I would go so far as to say that, a site for a house being a first necessity for man, it is the duty of an owner, where all the land available belongs to one person, to provide sites at the lowest possible cost. If, therefore, apart from such demand, the value of the land would be merely agricultural value, the price paid should be little in excess of that value, plus damage, if any, by severance, etc. But the influence of our profession could do much to obviate the need for any compulsion: and I hope it may be uniformly opposed to the short-sighted policy of placing difficulties in the way of providing sites for houses wherever required. Sites for such a national purpose should be readily available in every village in Great Britain on a demand arising.

6. A lessening of the cost of erection being of vital importance, something should be done to standardise doors, window-frames, staircases, and other timbers, and fittings. This would enable them to be turned out at a cheap rate without destroying individuality of elevation and design.

7. An appeal should be permitted to the Local Government Board when the erection of houses is restricted by unsuitable by-laws.

8. A consolidation of the existing Housing Acts should be made a part of any new legislation."

THE SOCIETY OF ARCHITECTS: PRESIDENTIAL ADDRESS.

THE opening meeting of the new session of the Society of Architects was held on Thursday, November 13, when the President, Mr. Percy B. Tubbs, delivered an address, in the course of which he said:—

"In surveying our work of the past year, I personally attach most importance to that part of it connected with the formation of a committee for the founding and establishing of an atelier in London, run on similar lines to those attached to the Ecole des Beaux-Arts, in Paris, which is now *un fait accompli*, and about which I shall have something to say later on.

In my last address I made a suggestion that there was room for two professional societies to look after the best interests of our profession. Since then I have had twelve months in which to consider more fully the matter, and although I read with great interest a considerable amount of adverse criticism in the professional Press, I see no reason to alter the view that I then expressed; in fact, if anything, I feel more strongly on the subject now than I did then, and I should very much like to see representative committees of both institutions meet to consider the question in all its bearings.

Having always taken a deep interest in matters relating to the general welfare of our profession, it is only natural that during my period of office, under a sense of *noblesse oblige*, I should have given the matter much closer consideration than heretofore with a view to ascertaining if there are any practical means within our reach the adoption of which would enable us to raise the status of our profession and the standard of its work. I believe that such a policy does exist, but its efficacy must rely to a large extent upon the cohesion and solidarity existing in our ranks.

A United Profession.

As a profession we must stand united; there must be unanimity of opinion and unity of action in all matters pertaining to the general welfare of the profession. Granted that for purposes of better administration subdivision into numerous associations and societies is desirable, yet, in all matters of general importance to the profession we should work as one harmonious whole.

If all architectural bodies could only be brought into agreement on this point I venture to think that nothing would conduce more to or more rapidly accelerate the interest and progress of our profession in every conceivable way. Therefore, the dominant chord I wish to strike in my address this evening is that of unity, and until we get unity in the profession, and we are at least agreed among ourselves, it is almost impossible to make the headway that is demanded by the vast majority of the practising architects throughout the country and by all those who realise the importance of architecture as an art and the necessity for the proper education of architects and their protection. Until we get a united profession it is almost impossible to deal effectually with such questions as the education and registration of architects, the proper government of architectural competitions, and the fixing of a scale of charges, which questions affect all architects whether members of any institution or not.

Registration.

I think that a very good starting-point for this policy is the question of registration. The Society during the last few months inaugurated a Press campaign in the interests of the compulsory registration of architects, and from the wide publicity given to the matter we have been able to secure the keen interest of influential members of both Houses of Parliament and of others deeply interested in the subject, but we are sadly handicapped through the lack of unity in the profession.

The benefits that would accrue from statutory education and registration must be patent to all, as, in protecting the interests and raising the status of the trained and fully qualified architects, not only would the public have a guarantee of professional ability, but it would do more than anything else to get rid of those who to the detriment of the public do not hesitate to poach in a domain which by education and experience we ought to have the right to regard as strictly our own.

Development of the Society.

In view of the rapid growth of the Society the Council thought it desirable last year to revise the Articles of Association, not only providing for present needs, but more particularly for its future development, and in doing so to form a new graduate class intermediate between the junior section and full membership, entrance to the new class to be by examination only.

It was felt desirable in dealing with the junior class of membership to set before them the necessity for qualifying for one of the higher classes as quickly as they reasonably could, and failing that to advise them to turn their attention to some other calling, as they were evidently not desirous of taking the profession up in earnest.

The result of this policy is just beginning to bear fruit, for the Council have found it necessary to intimate to a considerable number of students that their connection with the Society must lapse unless they are prepared to take things more seriously.

Personally, I am of opinion that although this will entail some financial loss and apparent decrease in the total membership, yet it must tend very greatly to strengthen the Society and to raise the standard of admission.

A situation naturally has arisen for which it is difficult at the moment to suggest a remedy, inasmuch as in the absence of statutory registration such persons cannot be prevented from starting in practice as architects, although they may be only partly trained and not possess the full qualifications necessary for the position.

On the other hand, the action which the Council has taken may result in arousing them to a sense of their responsibilities and induce them to further qualify for readmission into this or some other architectural body.

At any rate, it is obvious that the action of the Council in this matter is entirely disinterested and is in the best interests of the profession.

The additional disciplinary powers reposed in the Society by the new articles will enable the Council to effectually enforce the main principles laid down in the code of ethics adopted by the Society. All this must tend to the betterment of the Society as a professional body and to the advantage of its members.

Professional Defence.

I am glad to see that the example set by this Society in promoting a Professional Defence Fund and the machinery for its administration is being followed by kindred institutions not only at home but abroad.

The Society, up to the present, has not been called upon to take up any case, but the knowledge that such a fund exists has been of great service to members who have been able to call attention to the fact that the fund is actually in being, and that a very influential committee has been formed ready to advise on any matter affecting the interests of architects. The very existence of this fund is evidence, I think, that this Society is desirous of affording its members every possible assistance, in protecting their best interests, and consequently the profession generally.

I sincerely hope and feel that your Council will see their way to add to this fund from time to time, so that in the event of our having to fight a case we can see it right through without fear of being crippled through any lack of funds.

Architectural Education.

The part played by this Society in placing upon a working basis the proposals for the introduction of the Beaux-Arts method of educating architects into this country resulted, as you all know, in the formation of an influential committee to consider the whole matter; that committee, which is now an entirely independent one, is working on a scheme which strikes at the root of the whole matter, and your Society will always be entitled to the credit of supporting a pioneer movement of such great potentialities.

Apart from what the atelier has accomplished for the advantage of those who have placed themselves under its guidance, the Society has achieved its aim in enabling the committee to call attention to a fault of the present system of architectural training and to point to a remedy with such effect as apparently to cause architectural educational bodies seriously to consider the question. The result of all this is that we now see strong evidence of the main lines of the committee's proposals being adopted so far as circumstances permit at the moment. It is most earnestly to be hoped that all educational authorities will see the advantage of adopting Beaux-Arts methods in the near future.

The atelier in Wells-mews is being most enthusiastically supported by the students there, and one has only to attend the various exhibitions of the students' work that are held from time to time to see the marvellous strides that have been made in these few months in architectural composition and design.

It could not be hoped that such a scheme as this could be self-supporting from the start, and I hope that the Society will see their way clear to render the committee all the assistance that lies in their power, and particularly that they will afford it financial support until such a time as the movement becomes self-supporting.

Similar ateliers will, I firmly believe, at no very distant date, spring up in various districts round London, and possibly also preparatory ones in the provinces, and I hope and believe that they will ultimately be attached to a national school of fine arts.

There is no doubt that there is a demand for opportunities for further study of advanced design, where students who have completed the full curriculum provided in our various schools, and I believe that such an opportunity will be found in the ateliers already in existence.

I am sanguine enough to believe that similar ateliers will be started in connection with painting and sculpture, and this should lead to the arts working together in a national school, as they undoubtedly should do, when we should not only see a vast improvement in the design of our buildings, but should also see sculpture and painting applied to them in a proper manner, and this can only be arrived at by intimate understanding between the workers in the various arts.

Ministry of Fine Arts.

Last year I expressed the opinion that the time was fast approaching when architecture will come into her own again and resume that place in the public estimation which is her due and which she enjoys in more favoured countries, and we see evidence of this in a movement which has recently been started. A committee will, I believe, shortly be formed to consider fully the question of a Minister of Fine Arts. Personally, I wish the movement every success, and I hope this Society will offer the movement any support in its power. I cannot help thinking that if committees were formed in provincial towns with a central committee in London a great deal of useful work could be done in this direction, and, I believe, the literature that they might publish, for the information of the general public, would very soon arouse sufficient interest for the Government of the day to consider seriously the whole question; they might even appoint a Royal Commission to investigate the matter. I feel certain that a Minister of Fine Arts will be regarded in the near future as a necessity, and steps should be taken without delay to bring the matter very clearly before the powers that be.

It is rumoured that the London County Council has already taken steps to appoint an independent architect, who will be available, free of charge, to advise building owners as to the suitability of their designs for any building on important sites in London, and one can at least express the hope that this will be the thin end of the wedge for the appointment of a Minister of Fine Arts, and that London's example will be speedily followed in other large cities.

Official Architecture.

In my address last time I had a good deal to say about official architecture, and I pointed out the desirability of every public building being designed by the one man in the country who was best able to solve the particular problem involved, and this one man can only be discovered by a properly organised competition.

If we are to get the best possible design and solution of a particular problem competitions should be left as free and unfettered as possible, and the programme should set forth the requirements and make what suggestions are thought fit; but it should contain the fewest possible number of binding conditions. It follows that if a competitor did not adopt the suggestions he might possibly prepare an infinitely better scheme by working entirely on his own ideas; but this would mean that he would have no chance of success at all if the conditions were

(*Continued on page* 532.)

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xxiii.; Auction Sales, xxviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

* NOVEMBER 22.—**Manchester.**—MASONIC HALL.—The Building Committee are prepared to receive the names of architects willing to submit competitive designs. A limited number will be selected.

* NOVEMBER 24.—**Chelmsford.**—SCHOOLS.—The Chelmsford E.C. invite architects practising in Essex, and who are willing to compete in a limited competition, to submit their names by the above date, twelve of whom will be chosen.

NOVEMBER 29.—**Folkestone.**—BAND PAVILION.—The Folkestone Corporation invite designs for a band pavilion to be erected on the face of the West Cliff. See advertisement in issue for August 15, and "Competition News," August 22.

DECEMBER 19.—**Bury.**—WORKMEN'S DWELLINGS.—The Corporation of Bury are prepared to consider schemes from architects and builders for the erection of ten pairs of semi-detached cottages, as an extension to the existing housing scheme, off Bolton-road. Particulars on application to the Borough Engineer, Bank-street, Bury. Deposit, £1 1s.

DECEMBER 31.—**London.**—GOVERNMENT BUILDINGS.—The Commissioners of H.M. Works and Public Buildings invite designs from architects in competition for new offices for the Board of Trade, etc., in Whitehall-gardens, S.W. For particulars, see issues for September 5 and October 17, and also advertisement in issue of September 5.

JANUARY 2, 1914.—**Manchester.**—NEW BUILDINGS AND ALTERATIONS.—The Board of Directors of the Manchester Royal Exchange, Ltd., invite architects to submit designs for additional new buildings and alterations on the existing Exchange buildings. See advertisement in issue for September 5.

FEBRUARY 1.—**Coventry.**—TECHNICAL INSTITUTE.—The Coventry Corporation invite competitive sketch plans for a Municipal Technical Institute at Pool Meadow.

* MARCH 20.—**Belfast.**—ART GALLERY AND MUSEUM.—The Belfast Corporation invite designs for above buildings. Total cost not to exceed £75,000, of which only £30,000 will be spent at once. Assessor, Mr. John J. Burnet, A.R.S.A., LL.D.

APRIL 1.—**Sofia.**—DESIGNS FOR A ROYAL PALACE AND LAW COURTS.—Particulars from the Commercial Intelligence Branch of the Board of Trade, Basinghall-street, E.C. See page 178, August 9, and page 350, September 27, 1912; also page 708, June 20.

APRIL 2.—**Ottawa.**—DEPARTMENTAL AND COURTS BUILDINGS.—The Department of Public Works, Ottawa, invite architects to submit sketch designs in a preliminary competition for above buildings. Six will be chosen from these for final competition. The five unsuccessful competitors will receive $3,000. The winner will be entrusted with the work. See particulars in issue for September 19 and advertisement in issue of September 12.

NO DATE.—**Shipley.**—MUNICIPAL OFFICES.—The Shipley U.D.C. invite competitive plans and designs for new Municipal Offices. Architects desiring to compete may obtain a plan of the site and printed conditions of the competition on application to Mr. I. Lindow, Clerk to the Council, Council Offices, Shipley. The competition is open only to architects residing or having offices in any part of Yorkshire.

Contracts.

BUILDING.

NOVEMBER 15.—**Messing.**—SCHOOL.—Persons desirous of tendering for new elementary school at Messing for the Essex E.C. should send in their names to Mr. G. C. Holland, Clerk to Sub-Committee, the Technical College, Colchester, with a cheque for £2 2s as deposit. Tenders are returnable on November 28.

NOVEMBER 15.—**Newbiggin Colliery.**—SCHOOL.—Builders desiring to tender for the erection of a new school at Newbiggin Colliery, to accommodate 736 scholars, and also a housewifery centre and caretaker's dwelling-house, for the Northumberland E.C., should send their names (with a deposit of £2 2s.) to Mr. C. Williams, the Moothall, Newcastle-on-Tyne. Date for receipt of tenders to be fixed.

NOVEMBER 15.—**Willington.**—CHURCH.—Builders desirous of tendering for the erection of a Presbyterian church at Willington, Durham, should apply to Mr. J. Wilson Hays, architect, Wingate. Deposit, 10s. 6d.

NOVEMBER 17.—**Aspatria.**—COTTAGES.—For erection of two cottages at Aspatria for Mrs. Graves and Mr. T. Purdham. Messrs. W. G. Scott & Co., architects, 2, Park-lane, Workington.

NOVEMBER 17.—**Barrow-in-Furness.**—ALTERATIONS.—The Corporation invite tenders for alterations to shop in the Covered Market. Quantities, etc., on application at the Borough Engineer's Office, Town Hall.

NOVEMBER 17.—**Bentley.**—HOUSES.—For the erection of fourteen houses (part of forty-two) at Adwick-lane, Bentley, either for separate trades or complete construction. Specifications, etc., of Mr. John R. Bakewell, London House, Goldthorpe.

NOVEMBER 17.—**Edinburgh.**—DEMOLITION.—The Edinburgh Corporation invite tenders for the demolition of the small property fronting Gilchrist Entry, and in rear of the dwelling-houses in Queen's-place, Greenside, according to specification, etc., of their Architect, Mr. James A. Williamson, A.R.I.B.A., Public Works Office, City-chambers, from whom specification, etc., may be had.

NOVEMBER 17.—**Farnborough.**—ALTERATIONS, ETC.—The Guardians of Bromley Union, Kent, invite tenders for the execution of the following works in accordance with plans and specifications deposited at the Workhouse Master's Office, Farnborough, Kent, viz.:—(1) The erection of partitions and supplying and fixing sundry fittings at the general store at the Workhouse; (2) the erection of a washhouse at the Able-Bodied Test House, Tugmutton-lane, Farnborough. Forms of tender from the Board's Architect, Mr. F. Danby Smith, A.R.I.B.A., Parliament-mansions, Victoria-street, S.W.

NOVEMBER 17.—**Llantilio Crossenny.**—COTTAGES.—The Monmouth C.C. invite tenders for erection of two cottages at Llantilio Crossenny. Specification, etc., of Mr. Wm. Tanner, County Surveyor, Newport, Mon. Deposit, £1 1s.

NOVEMBER 17.—**Llantwit Fardre.**—ALTERATIONS, ETC.—The Glamorgan C.C. invite tenders for the following works at Ty Person Farm, Llantwit Fardre, about half a mile from Church Village Station, T.V.R.:—Alterations, additions and repairs to house and farm buildings. Mr. T. Mansel Franklen, Clerk of the C.C., Glamorgan County Hall, Cardiff.

NOVEMBER 17.—**Manchester.**—BOUNDARY WALL.—The Withington Committee of the Manchester Corporation invite tenders for the several works required in setting back the boundary wall at the Christie Playing Field, Barlow Moor-road, West Didsbury. Specification, etc., from the Surveyor to the Committee, Town Hall, West Didsbury.

NOVEMBER 17.—**New Malden.**—REPAIRS.—The Guardians of the Kingston Union invite tenders for repairs to roofs of stable, store, barn, etc., at their Branch Workhouse, Kingston-road, New Malden, Surrey. Specification, etc., of Mr. Chas. W. Dash, Clerk to the Guardians, Union Offices, Coombe-road, Kingston-on-Thames.

NOVEMBER 17.—**Oldham.**—SCHOOL.—The E.C. of the Corporation invite tenders for the separate works required in the erection of new infants' school, Higginshaw. Quantities, etc., from the architects, Messrs. Winder & Taylor, 61, Union-street, Oldham.

NOVEMBER 17.—**Portsmouth.**—KITCHEN, ETC.—The Portsmouth E.C. invite tenders for:—(1) Painting and cleaning inside of Girls' Secondary School, Southsea; and (2) constructing a kitchen and staircase at the Municipal College. Specification, etc., of Mr. A. H. Bone, architect, Cambridge Junction, Portsmouth.

NOVEMBER 18.—**Aberaman.**—SHOPS, ETC.—For the erection of shops and billiard hall at Aberaman for the Aberaman Cinema, Ltd. Specification, etc., of Messrs. Johnson & Richards, architects, Merthyr Tydfil. Deposit, £2 2s.

* NOVEMBER 18.—**Billericay.**—ALTERATIONS, ADDITIONS, ETC.—The Billericay R.D.C. invite tenders for alterations and additions to the Isolation Hospital, and for erection of a pavilion isolation block, laundry, and ambulance block.

NOVEMBER 18.—**Birmingham.**—DEMOLITION.—The Commissioners of H.M. Works and Public Buildings invite tenders for pulling down Birmingham old Inland Revenue office. Drawings on application to Mr. J. Tosh, H.M. Office of Works, 42, Paradise-street, Birmingham. Specification, etc. at H.M. Office of Works, Storey's Gate, London, S.W.

NOVEMBER 18.—**Bridlington.**—DEMOLITION.—The Priory Church Approach Trustees invite tenders for the demolition, etc., of three houses and premises in South Side, Cemetery-road. Mr. J. Earnshaw, Surveyor, Carlton House, Bridlington.

NOVEMBER 18.—**Grimsby.**—CLOAKROOMS.—The Education Authority invite separate tenders for erection of cloakrooms at Holme Hill and Hamilton Schools. Quantities, etc., of the architect, Mr. H. C. Soaping, Court-chambers, Grimsby.

NOVEMBER 18.—**Heckmondwike.**—ALTERATIONS.—The Liversedge U.D.C. invite tenders for alterations to two cottages at The Bottoms, Heckmondwike. Specifications, etc., of Mr. A. Rothera, Surveyor to the Council, Liversedge.

NOVEMBER 18.—**Newport.**—ALTERATIONS.—The Great Western Railway Company invite tenders for alterations to offices at Devon-place, Newport, Monmouthshire. Specification, etc., at the office of the Engineer at Newport Station.

NOVEMBER 19.—**Feniscowles.**—GOODS SHED.—The Lancashire and Yorkshire and London and North-Western Joint Railways invite tenders for the construction and erection of a goods shed at Feniscowles. Specification, etc., at the Engineer's Office, Hunts Bank, Manchester.

NOVEMBER 19.—**Hemsworth.**—HOUSES.—For the erection and completion of sixty-two dwelling-houses at Fitzwilliam, Hemsworth, for the South Kirkby, Featherstone, and Hemsworth Collieries, Ltd. Messrs. Garside & Pennington, architects and surveyors, Pontefract and Castleford.

NOVEMBER 19.—**Miserden.**—For erection of Church of England school at Miserden. Particulars of Mr. R. S. Phillips, architect, Gloucester. Deposit, £2 2s.

NOVEMBER 20.—**Wigan.**—ALTERATIONS, ETC.—The Corporation of Wigan invite tenders for alterations and additions at Pemberton Hospital, Billinge-road. Specification, etc., of the Borough Engineer, Mr. A. T. Gooseman, King-street West, Wigan.

NOVEMBER 21.—**Kendal.**—BUNGALOW.—Whole or separate tenders invited for the erection of an eight-roomed bungalow at Stonebank Green, Brigsteer-road, near Kendal. Specifications, etc., of Mr. Stephen Shaw, F.R.I.B.A., architect, Kendal.

NOVEMBER 21.—**Torquay.**—VILLA.—For erection of a villa at Milber Park, for Mr. H. Downhall-Webb. Mr. F. G. Moore, B.Sc., architect and surveyor, 9, Fleet-street, Torquay.

NOVEMBER 21.—**Troedyrhiw.**—RENOVATION.—For the reparation and renovation of Mount Zion Church, Troedyrhiw. Specifications of Mr. William Dowdeswell, M.S.A., architect, Treharris.

NOVEMBER 22.—**Bishop's Wood.**—RIFLE RANGE.—Tenders invited by the Cornwall Territorial Forces Association for the construction of a rifle range at Bishop's Wood, near Truro. Plans, etc., of Mr. C. Reginald Caldwell, architect and surveyor, Penzance.

NOVEMBER 22.—**Chideock.**—DRILL-HALL.—The Dorsetshire Territorial Force Association invite tenders for erection of drill-hall at Chideock. Specifications of Mr. F. T. Maltby, architect and surveyor, Dorchester.

NOVEMBER 22.—**Glasgow.**—WASHHOUSE EXTENSION.—The Corporation invite tenders for the several works required in connection with the proposed extension of Belvidere Washhouse, London-road. Specifications, etc., of Mr. Peter Fyfe, Chief Sanitary Inspector, 23, Montrose-street.

* NOVEMBER 22.—**Manchester.**—SCHOOL.—The Manchester E.C. invite tenders for erection of a new school.

NOVEMBER 22.—**Towan Cross.**—HOUSE.—For the erection of a house at Towan Cross, near Porthtowan. Specifications, etc., of Mr. A. Cornelius, architect, Truro.

NOVEMBER 24.—**Llandaff.**—SCHOOL ADDITIONS.—The Governors of Howell's Glamorgan County School, Llandaff, invite tenders for new dormitories, servants' hall, etc. Quantities, etc., of Mr. G. E. Halliday, F.S.A., 19, Castle-street, Cardiff.

NOVEMBER 24.—**Pebworth.**—HOUSES.—The Pebworth R.D.C. invite tenders for the erection of ten cottages at Pebworth under the Housing of the Working Classes Acts, in accordance with plans, etc., prepared by Mr. E. Holloway, M.Inst.M.Cy.E., Surveyor to the Council. Specifications, etc., of Mr. E. H. Wadams, Clerk to the Council, Union Offices, Evesham. Deposit, £2 2s.

NOVEMBER 24.—**Worthing.**—ELECTRICITY STATION.—The Worthing Corporation invite tenders for extensions in connection with the electricity station at the Corporation Depôt, High-street. Specification, etc., of the Borough Surveyor, Municipal Offices, Worthing.

* NOVEMBER 25.—**Bermondsey, S.E.**—PUBLIC CONVENIENCE.—The Bermondsey B.C. invite tenders for a public convenience.

[Those with an asterisk (*) are advertised in this issue.]

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NOVEMBER 26.—**Sedgefield.**—HOUSES.—The Sedgefield R.D.C. invite tenders for the erection of twenty-five houses at Trimdon Grange, in the Township of Trimdon, Co. Durham. Specifications, etc., of Mr. James Stones, Surveyor, Sedgefield. Deposit, £3 3s.

* NOVEMBER 27.—**Manchester.**—ALTERATIONS TO LABOUR EXCHANGE.—The Commissioners of H.M. Works, etc., invite tenders for alterations to a Labour Exchange.

NOVEMBER 27.—**Minety.**—REPAIRS, ETC.—The Minety P.C. invite tenders for repairs to nine cottages, and the reconstruction of four water-closets, and repairs to roofs of six cottages. Specifications of Mr. E. E. Taylor, Clerk to Council, Minety, Wilts.

* NOVEMBER 29.—**Southampton.**—SCHOOL.—The Southampton C.C. invite tenders for alterations to the Basingstoke, Sarum Hill School, and re-erecting a corrugated-iron building, etc.

* DECEMBER 3.—**Camberley.**—LECTURE HALL, ETC.—The Secretary of State for War invites tenders for erection of a lecture hall and covered way.

DECEMBER 3.—**Walsall.**—WORKHOUSE BUILDINGS.—The Guardians of Walsall Union invite tenders for the erection of new buildings at their Workhouse in the Pleck-road, Walsall, in accordance with plans and specifications prepared by Messrs. H. E. Lavender & Son, architects, Bridge-street, Walsall, at whose offices specifications, etc., may be obtained. Deposit, £1 1s.

* DECEMBER 5.—**Edenbridge.**—SCHOOL.—The Kent E.C. invite tenders for erection of a school for special subjects.

DECEMBER 5.—**Llanelly.**—ALTERATIONS, ETC.—For alterations and renovation of Bryn Independent Chapel, near Llanelly. Specifications, etc., of Mr. J. White, Woodbine, Pemberton, near Llanelly, or at my office, Mr. D. J. Jones, M.S.A., architect and surveyor, Talbot-road, Port Talbot.

DECEMBER 6.—**Tedburn St. Mary.**—COTTAGES.—For the erection of two cottages at Withycombe, Tedburn St. Mary, for Mr. J. B. Mann. Specifications may be seen at Withycombe Farm. Tenders to Mr. Mann.

NO DATE.—**Abercarn.**—RIFLE RANGE.—The Monmouthshire Territorial Force Association invite tenders for the construction of an inclosed miniature rifle range adjoining the Abercarn Drill-hall. Particulars of the architects, Messrs. Habershon, Fawckner, & Co., F.R.I.B.A., 41, High-street, Newport, Mon.

NO DATE.—**Balby.**—HOUSE.—The U.D.C. of Balby-with-Hexthorpe invite tenders for the erection of a dwelling-house at their sewage-disposal works, Woodfield-lane, Balby, Doncaster. Particulars of Mr. George Gledhill, Surveyor, Council Offices, Balby, Doncaster.

NO DATE.—**Bradford.**—HOLIDAY HOME.—For the various works required in the erection of the holiday home for the Bradford Cinderella Club. Quantities of Messrs. Walker & Collinson, architects, Exchange-buildings, Bradford.

NO DATE.—**Earlby.**—CLUB PREMISES.—For the erection of club premises in New-road, Earlby, for Earlby Band Club. Plans, etc., of Mr. W. Henry Mann, 16, Grove Hall-drive, Beeston, Leeds.

NO DATE.—**Keighley.**—CONVENIENCES.—Various works required in connection with the erection of combined conveniences in Victoria Park. Particulars of Borough Engineer.

NO DATE.—**Lancaster.**—DEMOLITION.—For pulling-down a number of cottages, etc. Particulars of Messrs. McAdam & Russell, Lancaster.

NO DATE.—**Littleborough.**—RENOVATIONS.—For interior renovations at two schools, to be carried out during Christmas holidays. Particulars of Mr. J. A. Grindrod, 32, Lord-street, Rochdale.

NO DATE.—**Pocklington.**—TERRITORIAL HEADQUARTERS.—For the erection of Territorial Headquarters at Pocklington. Messrs. Wellsted, Dossor, & Wellsted and A. Easton, associated architects, Waterloo-chambers, Hull.

NO DATE.—**Wealdstone.**—BUSINESS PREMISES.—The Watford Co-operative Society, Ltd., invite tenders for the erection of new business premises at Mason's-avenue, Wealdstone. Specification, etc., of Mr. Chas. P. Ayres, architect, 5, Platt's-avenue, Watford.

ENGINEERING, IRON, AND STEEL.

NOVEMBER 17.—**Rotherham.**—TRAMWAY MATERIAL.—The Corporation invite tenders for supply of about 420 tons of tramway rails, special points, etc. Specifications, etc., of Mr. E. B. Martin, Borough Engineer, Town Hall, Rotherham.

NOVEMBER 18.—**Bedwellty.**—PIPES.—The Bedwellty U.D.C. (Water Department) invite tenders for the supply of steel mains, together with the necessary specials. Forms of tender, etc., from Mr. Dan H. Price, Engineer and Surveyor to the Council, Aberbargoed.

NOVEMBER 18.—**Bedwellty.**—PIPES.—The Bedwellty U.D.C. (Gas Department) invite tenders for the supply and delivery of 1,850 yds. of 6-in. and 10 yds. of 4-in. steel main, together with the necessary specials. Forms of tender, etc., from Mr. Dan H. Price, Engineer and Surveyor to the Council, Aberbargoed.

NOVEMBER 18.—**Burma.**—SCREWS AND RAILS.—The Board of Directors of the Burma Railways Company, Ltd., invite tenders for the supply of 294,000 steel coach screws for 60 lb. (B.S.) flat-footed rails. For each specification a fee of 10s. will be charged. Mr. W. Home, Managing Director, 199, Gresham House, Old Broad-street, London, E.C.

NOVEMBER 18.—**London.**—STEEL GIRDERS.—The Great Western Railway Company invite tenders for the supply of about 90 tons of steel bridge girders and other iron and steel work of British manufacture. Specification at the office of the Engineer at Paddington Station.

NOVEMBER 20.—**Bradford.**—GAS RETORTS, FIREBRICKS, ETC.—The Bradford Corporation invite tenders for the supply of gas retorts and of firebricks and fireclay required in the fixing of such retorts during the year 1914. Forms of tender on application to Mr. Chas. Wood, Gas Engineer, Town Hall, Bradford.

NOVEMBER 24.—**Epsom.**—PIPES.—The Epsom U.D.C. invite tenders for the supply of about 800 12-ft. cast-iron water pipes and specials, 15 in. in diameter, to the specification of Mr. W. Vaux Graham, M.Inst.C.E., 5, Queen Anne's-gate, Westminster, from whom particulars can be obtained. Deposit, £2 2s.

NOVEMBER 24.—**Epsom.**—PUMPING PLANT.—The Epsom U.D.C. invite tenders for the supply and erection of pumping plant at the waterworks in East-street, to raise water from the well 80 ft. deep, and deliver it to the reservoir on the Downs against a combined head of about 350 ft. Particulars of Mr. W. Vaux Graham, M.Inst.C.E., 5, Queen Anne's-gate, Westminster. Deposit, £5 5s.

NOVEMBER 24.—**Leicester.**—STEEL ROOF TRUSSES, ETC.—The Leicester Corporation invite tenders for the supply and erection of steel roof trusses, stancheons, girders, etc., at the car repairing shops Specification, etc., of the Borough Surveyor, Town Hall, Leicester. Deposit, £1.

NOVEMBER 24.—**Liverpool.**—HOSPITAL STOVES.—The Committee of Visitors of Rainhill Asylum invite tenders for supplying and fixing three ventilating hospital stoves. Particulars of Mr. Jas. Gornall, Clerk and Steward, County Asylum, Rainhill.

NOVEMBER 24.—**Liverpool.**—COOKING APPARATUS.—The Committee of Visitors of Rainhill Asylum invite tenders for the supply of boiling pans, steam chambers, and steam hot closets for the Asylum kitchen. Particulars of Mr. Jas. Gornall, Clerk and Steward, County Asylum, Rainhill.

NOVEMBER 24.—**Liverpool.**—LAUNDRY MACHINERY.—The Committee of Visitors of Rainhill Asylum invite tenders for laundry machinery and drying apparatus. Particulars, etc., of Mr. Jas. Gornall, Clerk and Steward, County Asylum, Rainhill.

NOVEMBER 24.—**Liverpool.**—ELECTRIC FITTINGS.—The Committee of Visitors of Rainhill Asylum invite tenders for electric wiring and fittings for a new ward. Particulars, etc., of Mr. Jas. Gornall, Clerk and Steward, County Asylum, Rainhill.

NOVEMBER 25.—**Maldon.**—CONCRETE RESERVOIR, TANK, ETC.—The R.D.C. of Maldon invite tenders for the execution of the following works:—(1) Concrete reservoir to hold 10,000 gallons, small engine-shed, and foundations for overhead tank; (2) small combined oil-engine and pump; (3) overhead tank to hold 10,000 gallons, on steel staging. Specification of Mr. Almond, the Council's Surveyor, 6, Market-hill, Maldon.

NOVEMBER 26.—**Hammersmith.**—ELECTRICAL INSTALLATION.—The London C.C. invites tenders for an electrical installation at the Hammersmith Trade School for Girls, Lime-grove, Hammersmith, comprising about 140 lighting points. Specification, etc., of the Chief Engineer of the Council, Mr. G. W. Humphreys, at the County Hall, Spring-gardens, S.W. Deposit, £1.

NOVEMBER 26.—**Weymouth.**—IRON TANK.—The Weymouth Corporation invite tenders for a galvanised-iron petroleum tank, capable of holding 200 gallons. Mr. H. A. Huxtable, Town Clerk.

NOVEMBER 28.—**Manchester.**—BOILERS, ETC.—The Electricity Committee of the Manchester Corporation invite tenders for the supply and erection at their Stuart-street generating-station of two water-tube boilers and superheaters, economisers, coal chutes, ash conveyor, pipe connections, additional stoker shafting, and clutches, and pneumatic ash handling plant to boiler-house No. 2. Specification, etc., of Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester. Deposit, £2 2s.

DECEMBER 17.—**Egypt.**—STEEL.—The Egyptian War Department invite tenders for the supply of mild steel tees, angles, bars, and sheets. Particulars from Sir A. L. Webb, Queen Anne's-chambers, Westminster, S.W.

DECEMBER 22.—**Melbourne.**—RAILWAY ELECTRIFICATION.—The Agent-General for Victoria invites tenders for the following apparatus for use in connection with the signalling on the Melbourne suburban railways:—(1) Track feed-boxes, including signal transformers, switch-gear, and accessories; (2) track resistances; (3) impedance bonds; (4) track relays and relay-boxes. Tenders can be submitted for any section individually, or for all four. Specifications, etc., from the Agent-General for Victoria. Deposit, £5 5s.

FURNITURE, PAINTING, MATERIALS, etc.

NOVEMBER 17.—**Newcastle-on-Tyne.**—STORES.—The Tyne Improvement Commission invite tenders for the supply of stores for twelve months from January 1, 1914. Forms of tender on application at the office of the Commissioners' Engineer, Clarendon House, Clayton-street West, Newcastle-upon-Tyne.

NOVEMBER 17.—**Portsmouth.**—PAINTING, ETC.—The Education Committee invite tenders for painting and cleaning certain schools during the Christmas vacation. Specifications, etc., of Mr. A. H. Bone, architect, Portsmouth.

NOVEMBER 18.—**Edinburgh.**—STORES.—The Prison Commissioners for Scotland invite offers for supplying the prisons with oils, paints, etc., for twelve months from January 1 next. Forms of tender and other information can be obtained at the prisons. Mr. D. Crombie, Secretary, Prison Commission for Scotland, Edinburgh.

NOVEMBER 18.—**West Hartlepool.**—STORES.—The Corporation invite tenders for goods and materials for one year, including kerbstone, flags, channell blocks, paving setts, lime, etc., tools, hardware, etc. Specifications of the Borough Engineer, West Hartlepool.

NOVEMBER 19.—**Chorley.**—BRICKS, ETC.—The Chorley Corporation invite tenders for the following:—80,000 best plastic engineering bricks and 70,000 seconds; 480 lin. yds. of 14½ in. by 6 in. machine-dressed coping; 150 to 200 tons best Portland cement, etc. Specifications, etc., from Mr. G. H. Hopkinson, Borough Surveyor.

NOVEMBER 19.—**Hull.**—PAINTING.—The Hull Education Committee invite tenders for internal painting and cleaning at certain schools. Particulars of Mr. J. T. Riley, Education Offices, Albion-street, Hull.

NOVEMBER 20.—**Carnarvon.**—FURNITURE.—The Guardians of Carnarvon Union invite tenders for furnishing their new Infirmary. Specification of Mr. J. Henry Thomas, Clerk, 14, Market-street, Carnarvon.

NOVEMBER 21.—**Rhondda.**—PAINTING, ETC.—The Rhondda U.D.C. invite tenders for the following works:—(1) Painting and colouring (inside and outside) of iron classrooms at the Treherbert, Ynyswen, and Llwynypia Council Schools; (2) improvements at the Ferndale Girls' School. Specifications, etc., of Mr. Jacob Rees, Hillside Cottage, Pentre.

NOVEMBER 22.—**Felling.**—MATERIALS.—The U.D.C. of Felling invite tenders for the supply of macadam; Heworth freestone kerb, flags, setts, etc.; whinstone kerb setts, etc.; Portland cement, sanitary pipes, etc., for twelve months. Tender forms from the Surveyor, Council-buildings, Felling-on-Tyne.

* NOVEMBER 25.—**Edmonton.**—BRITISH PORTLAND CEMENT.—The Edmonton U.D.C. invite tenders for supply and delivery of British Portland cement.

NOVEMBER 25.—**Enniskillen.**—STORES.—The Sligo, Leitrim, and Northern Counties Railway Company invite tenders for stores for twelve months from January 1 to December 31, 1914, including cement, slates, sewer pipes, firebricks, etc.; colours, etc.; iron castings, tools, etc. Mr. John Duff, Secretary, Secretary's Office, Enniskillen. Forms (thirty-six in all), 1s. each.

NOVEMBER 25.—**Gateshead.**—STORES.—The North-Eastern Railway Company invite tenders for the supply during the six or twelve months from January 1, 1914, of various articles, including metal goods, cement, concrete and artificial stone flags, sanitary drain pipes, chimney-pots, etc. Forms of tender, specification, etc., of Mr. E. H. Clark, Stores Superintendent, Gateshead.

NOVEMBER 25.—**York.**—TELEGRAPH STORES.—The North-Eastern Railway Company invite tenders for telegraph stores. Forms of tender on application to Mr C. H. Ellison, Telegraph Superintendent, York.

NOVEMBER 26.—**Kingston-on-Thames.**—STORES.—The Lunatic Asylums Visiting Committee of the Surrey C.C. invite tenders for the supply for twelve calendar months of painters' and glaziers' materials, hardware, etc. Mr. Reginald A. Hodges, County Hall, Kingston-on-Thames.

ROADS, SANITARY AND WATER WORKS.

NOVEMBER 17.—**Blackburn.**—STREET WORKS.—The Highway Committee invite tenders for the following works respectively:—Excavating, forming, and paving of several streets. Specifications, etc., of Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

NOVEMBER 17.—**Foulridge.**—WATERWORKS.—The Burnley R.D.C. invite tenders for work at the reservoir at Whitemoor, Foulridge, including concrete lining to reservoir, and brick lining to well. Particulars of Mr. H. Pritchard, engineer, 18, Nicholas-street, Burnley.

NOVEMBER 18.—**Bridlington.**—SEWER.—The Sanitary Committee invite tenders for laying 9-in. sewer in North-street. Specifications, etc., of Mr. E. R. Matthews, Borough Surveyor, Town Hall.

NOVEMBER 19.—**Naas.**—ROADWORK.—The Naas (No. 1) R.D.C. invite tenders of roadwork. Schedules of work, etc., of Mr. D. J. Purcell, Clerk to the Council, Naas, Co. Leinster.

NOVEMBER 20.—**Grindleford.**—ROAD WIDENING.—The Derbyshire C.C. invite tenders for the widening of the main road between Grindleford Station approach and Grindleford Bridge. The projected works will include a considerable amount of earthwork and rubble walling. Specification, etc., of Mr. J. W. Horton, A.M.Inst.C.E., County Surveyor, County Offices, Derby. Deposit, £2.

NOVEMBER 21.—**Prestwich.**—STREET WORKS.—The U.D.C. of Prestwich invite tenders for carrying out works of private street improvement in Hilton-crescent. Specification, etc., from the Surveyor, Prestwich. Deposit, £1 1s.

NOVEMBER 21.—**Roade.**—SEWERAGE.—The R.D.C. of Hardingstone invite tenders for alterations to filter beds and sewerage works at Roade. Specifications may be seen at Mr. F. Harper's, Hardingstone.

NOVEMBER 21.—**Shrewsbury.**—ROADS.—The Shrewsbury Corporation invite tenders for constructing a street from Longden Coleham to Belle Vue-road. Plans, etc., of Mr. W. Chapple Eddowes, Borough Surveyor, Borough Surveyor's Office. Deposit, £1.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NOVEMBER 24.—**Liverpool.**—SANITARY FITTINGS.—The Committee of Visitors of Rainhill Asylum invite tenders for sanitary fittings, viz., baths, lavatories, water-closets, etc. Particulars, etc., of Mr. Jas. Gornall, Clerk and Steward, County Asylum, Rainhill.

NOVEMBER 24. — **Pontypridd.** — SEWER.—The Pontypridd U.D.C. invite tenders for the laying only of about 84 yds. of 12-in. steel tube sewer and 48 yds. of 9-in. steel tube sewer at Pwllgwaun, Pontypridd. Specification, etc., of Mr. W. E. Lowe, Engineer and Surveyor to the Council, Municipal Buildings, Pontypridd. Deposit, £1 1s.

NOVEMBER 24. — **Pontypridd.** — SUSPENDING SEWER.—The Pontypridd U.D.C. invite tenders for the suspending only of about 100 yds. of steel tube sewer from the Mill-street Viaduct, and laying only of about 50 yds. of cast-iron sewer on masonry piers in the River Rhondda. Specification, etc., of Mr. W. E. Lowe, Engineer and Surveyor to the Council, Municipal Buildings, Pontypridd. Deposit, £1 1s.

NOVEMBER 24.—**Southowram.**—STREET WORKS.—The Southawram U.D.C. invite tenders for flagging, kerbing, and channelling certain roads. Specification of Mr. J. Edgar Oates, Surveyor, Council Offices, Southawram.

* NOVEMBER 26.—**Hammersmith.**—PAVING.—The Hammersmith B.C. invite tenders for paving carriageway and footways.

NOVEMBER 27.—**Lewes.**—SEWAGE WORKS.—The Guardians of the Lewes Union invite tenders for the construction of cast-iron and stoneware pipe sewers, manholes, etc., and sewage purification works, comprising detritus and anaërobic tanks, percolating filter bed, and sand filter for the treatment and disposal of the sewage. Drawings, etc., of the Engineer, Mr. H. Bertram Nichols, M.Inst.C.E., of 11, Victoria-street, Westminster, S.W. Deposit, £2 2s.

NOVEMBER 29.—**East Grinstead.**—REFUSE DESTRUCTOR.—The East Grinstead U.D.C. invite schemes and tenders from firms specialising in the erection of refuse destructors. General conditions, etc., of Mr. W. E. Woollam, Engineer and Surveyor to the Council. Deposit, £5 5s.

NOVEMBER 29.—**Lockerbie.**—SEWERAGE WORKS.—The Lockerbie T.C. invite tenders for the execution of sewerage works, comprising the providing and laying of about 750 yds. of 12-in. earthenware pipe sewers, with manholes, etc. Particulars of the engineers, Messrs. D. Balfour & Son, C.E., 3, St. Nicholas-buildings, Newcastle-on-Tyne.

NOVEMBER 29. — **Rishworth.** — DRAIN. — The Rishworth U.D.C. invite tenders for laying a 9-in. surface-water drain, with the necessary connections, from Paper Millplane to Booth-lane, on the Oldham and Ripponden-road, length, 1 furlong 96 yds. Particulars from Mr. John Eastwood, Surveyor.

NOVEMBER 29. — **Teignmouth.** — ROADS.—The U.D.C. of Teignmouth invite tenders for the widening and improvement of portions of Bishopsteignton-road and Mill-lane, in the Urban District of Teignmouth. Specification, etc., at the office of Mr. F. W. Knight, Surveyor and Water Engineer, Town Hall, Teignmouth. Deposit, £1 1s.

NOVEMBER 30.—**Kings Langley.**—SEWERAGE.—The Hemel Hempstead R.D.C. invite tenders for the construction of sewerage works. The works will comprise 358 yds. lin. of 9-in. stoneware pipe sewer, with all appurtenant works. Construction of two percolating filter beds, additions to present pumping-station, and other sundry works. Quantities, etc., of the Engineer, Mr. W. H. Radford, C.E., Albion-chambers, King-street, Nottingham. Deposit, £2 2s.

NO DATE. — **Exmouth.**—WATER WORKS.—The Exmouth U.D.C. invite tenders for the work (labour only) required in laying water mains in St. Andrew's-road. Particulars of Mr. Samuel Hutton, Engineer and Surveyor, Council Offices, Exmouth.

Public Appointment.

* NOVEMBER 25.—BOROUGH ENGINEER'S ASSISTANT.—The Kensington B.C. invite applications for the above post. Salary, £215 per annum, rising to £260.

Auction Sales.

* NOVEMBER 19.—**Harrow-road.**—Mr. H. W. Smith will sell by auction, on the premises, the stock-in-trade and plant of a builder and contractor.

* NOVEMBER 21. — **Chelsea.** — Messrs. Tyler & Co. announce that the date of the Phene Estate sale has been postponed.

* NOVEMBER 25.—**Catford Hill.**—Messrs. J. T. Skelding & Co. will sell by auction, at the depôt, a timber and builders' merchant's stock.

* NOVEMBER 25.—**Fulham.**—Mr. H. W. Smith will sell by auction, on the premises, the stock and plant of a tennis and racquet court contractor and plaster decorator.

* NOVEMBER 26. — **London.**—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

* NOVEMBER 27.—**London.**—Mr. H. W. Smith will sell by auction, on the premises, a quantity of well-seasoned timber.

* DECEMBER 3.—**Thornton Heath.**—Messrs. Douglas Young & Co. will sell by auction, at the Mart, freehold property.

[Those with an asterisk (*) are advertised in this issue.]

(*Continued from page 529.*)

binding, instead of, as I propose, making them merely suggestions.

Architectural Competitions.

If the promoters knew exactly what they wanted there would be no necessity for a competition, but as a rule they have a vague idea what their requirements are, and if an architect by departing from their suggestions can show them a better scheme it surely is in the interests of the promoters to see such a scheme. Therefore the competitor should have as free a hand as possible.

There is a very great deal of useful work that could be done by the various architectural societies throughout the country in connection with competitions in the direction of the proper organisation and regulation of architectural competitions. This is another very strong reason for unity.

I have yet to learn that it is a good thing for the profession that architects competing should have their designs published in book form and sold at the rate of four a penny. It seems to me that this has only to be carried far enough for people to cease altogether to require the services of an architect when they contemplate the erection of a small country residence, house, cottage, or other building that can be easily adapted to suit any site.

An Ideal London on Paper.

Town-planning schemes are being prepared in a great many districts round London, and if steps are to be taken to provide a boulevard on the outskirts there is no time to be lost. I, personally, have made a trip round London on about the seven-mile radius, and, I think, as far as the north-west, north, and north-east districts are concerned it could be done at a comparatively small cost, and it would prove, I believe, a real boon to London, and should be considered in connection with the town-planning schemes now being prepared.

Another point which I should like to emphasise is the question of improvements to be carried out in our big cities. It seems to me that if a committee of architects could be formed to consider the maps of the various towns in detail, and to lay down on the maps the street improvements which should ultimately be carried out when the opportunities arise, with due regard, of course, to the preservation of ancient monuments and fine old buildings, our towns and cities would ultimately become as beautiful as possible, and we should be all the time working to that end.

Had such a plan been in existence before the Great Fire of London it would not have been necessary to consider after the catastrophe the best method of rebuilding, as that would have been already settled, but as it was they had no preconsidered scheme of improvement, and when it was decided what was the right thing to do reconstructions had actually commenced, and a grand opportunity was lost. We should all have been glad to have seen Wren's grand conception carried out. We must, I feel, be prepared to avail ourselves of every possible opportunity of improving our towns and cities and to have a scheme laid down on paper, so that when chances for making improvements come we shall not have to start thinking what is best to be done—we should simply have to refer to the maps and carry out at least a portion of the settled scheme.

Again, when the great fire took place in the Jewin-street area of the City of London improvements could have been made, and a large area of back land brought up to a valuable frontage which would have gone a long way towards paying the cost of the improvement scheme. As we are now situated it is only when a catastrophe occurs that we have occasion to start thinking about improvements; whereas, if a definite scheme was in readiness for such emergencies no time would have to be lost, and part of a thoroughly well-considered scheme carried out instead of either rebuilding on the old lines or adopting a scheme not so fully considered.

Smoke Abatement.

What we as architects should try to do is to beautify our cities as opportunities arise. We could make a start by giving all the support possible to the smoke abatement movement. This would tend to purify our atmosphere and give us more frequent opportunities of seeing our buildings under blue skies and brilliant sunshine, and enhance the charm of architectural beauty.

Our stone buildings would then, no doubt, instead of weathering black on one side and white on the other, assume the beautiful tints they do in many Continental cities. We should encourage on all possible occasions the use of smokeless fuel, and if we did this in private houses a great deal of the smoke nuisance would be abated. As it is, I firmly believe that in London the smoke arises more from the huge aggregate of private houses than from the factory chimneys.

Craftsmanship.

Another very important matter which should receive careful consideration is that of the encouragement of craftsmanship. As an example, one way of bringing this about would be to increase the responsibilities of the men entrusted with the work. I should like to see the man actually in charge of the work take his own particulars from the job, carry it out himself, and fix it at completion. A great deal of the interest which we see in mediæval buildings is due to craftsmanship. In those days the craftsman had a fairly free hand and worked out his own scheme for the particular work assigned to him, and it was left practically with all confidence in his hands by the master mason or the architect, for the man entrusted with the work was known to be a competent craftsman, and his individuality was recognised and appreciated. But now if a fine piece of work is carried out the firm which is employed take all credit for it, and the name of the actual individual craftsman rearly transpires.

It seems to me that the men themselves who have the greatest responsibilities in carrying the fine piece of work to a successful issue should be recognised. A good example of this is told of a certain well-known architect, who, when he designed a village hall, promised to recognise the merit of the workmen by having their names carved on one of the beams in the club-room. This is the kind of encouragement the men appreciate, and the architect in question had every reason, I understand, to be grateful to the men for the way his design was interpreted and carried out.

Conclusion.

In conclusion, I would again call the attention of my fellow-members to the dominant note in my remarks this evening—unity. I would like you to understand that the Council of this Society will always be ready to receive any suggestions that are likely to further this laudable object which is of such great importance to the general welfare of our profession. It seems to me that such matters as architectural education and registration, architectural competitions, a scale of charges, a Ministry of Fine Arts, professional defence, official architecture, and other matters which I have alluded to in my address would be enormously helped if we could only be united and pull together in the right direction. Our greatest chance of success lies in our being a united profession, and, therefore, I plead for unity."

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

	£ s. d.
Per 1000 Alongside, in River.	
Best Stocks	1 16 0
Picked Stocks for Facings	2 10 0
Per 1000, Delivered at Railway Depôt.	£ s. d.
Flettons	1 14 0
Best Fareham Red	3 12 0
Best Red Pressed Ruabon Facing	5 0 0
GLAZED BRICKS—	
Best White, Ivory, and Salt Glzd Str'tch'rs	12 7 6
Headers	11 17 6
Quoins, Bullnose and 4½ in. Flats	15 17 6
D'bleStr'tch'rs	17 17 6
Best Blue Pressed Staffordshire	3 15 0
Do. Bullnose	4 0 0
Best Stourbridge Fire Bricks	4 0 0
Double Headers	1s 17 6
One Side and two Ends	18 17 6
Two Sides and one End	19 17 6
Splays and Squints	17 7 6

Second Quality £1 10s. per 1000 less than best.

BRICKS, &c. (*Continued*).

	£ s. d.	
Thames and Pit Sand	7 0	per yard, delivered.
Thames Ballast	5 9	„ „
Best Portland Cement	36 0	per ton, „
Best Ground Blue Lias Lime	19 0	„ „

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	14s. 0d. per yard delivered.
Stourbridge Fireclay in sacks	27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—Delivered on road waggons, Paddington Depôt	1 7½
Do. do. Delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE (20 ft. average)—Brown Whitbed, Delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½
White Basebed, Delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 6½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Cleseburn Red Freestone	2 0
Beer in blocks	1 6		
Greenshill in blocks	1 10	Red Mansfield Freestone	2 4
Darley Dale in blocks	2 4	Palaere & Gwespyr Stone	2 4
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20 x 10 best blue Bangor	13 2 6	20 x 10 best Eureka unfading green	15 17 6
20 x 12 ditto	13 17 6	20 x 12 ditto	18 7 6
20 x 10 1st quality ditto	13 0 0	18 x 10 ditto	13 5 0
20 x 12 ditto	13 15 0	16 x 8 ditto	10 5 0
16 x 8 ditto	7 5 0	20 x 10 permanent green	11 12 6
22 x 10 best blue Portmadoc	12 12 6	18 x 10 ditto	9 12 6
16 x 8 ditto	6 12 6	16 x 8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindle (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.		£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15 0 0	..	16 10 0
Deals: best 3 in. by 9 in.	15 0 0	..	16 0 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	12 10 0	..	13 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0		less than 7 in. and 8 in.
Deals: seconds	1 0 0		less than best
Battens: seconds	0 10 0		
2 in. by 4 in. and 2 in. by 6 in.	11 10 0	..	12 10 0
2 in. by 4½ in. and 2 in. by 5 in.	10 10 0	..	11 10 0
Foreign Sawn Boards—1 in. and 1½ in. by 7 in.	0 10 0		more than battens.
½ in.	1 0 0		„

Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0	..	6 5 0
Seconds	4 10 0	..	5 0 0
Small timber (8 in. to 10 in.)	3 17 6	..	4 0 0
Small timber (6 in. to 8 in.)	3 5 0	..	3 10 0
Swedish balks	2 12 6	..	3 0 0
Pitch-pine timber (30 ft. average)	6 0 0	..	7 0 0

JOINERS' WOOD. White Sea: first yellow deals, 3 in. by 11 in.	At per standard. 26 0 0	..	27 0 0
3 in. by 9 in.	24 0 0	..	25 0 0
Battens, 2½ in. and 3 in. by 7 in.	18 10 0	..	19 10 0
Second yellow deals, 3 in. by 11 in.	21 10 0	..	22 10 0
„ „ 3 in. by 9 in.	20 0 0	..	21 0 0
Battens, 2½ in. and 3 in. by 7 in.	15 0 0	..	16 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	16 0 0	..	17 0 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0	..	15 0 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard. £ s. d.		£ s. d.
Petersburg: first yellow deals, 3 in. by 11 in.	23 0 0	..	24 0 0
Do. 3 in. by 9 in.	20 0 0	..	21 0 0
Battens	15 0 0	..	16 0 0
Second yellow deals, 3 in. by 11 in.	17 10 0	..	18 10 0
Do. 3 in. by 9 in.	16 0 0	..	17 0 0
Battens	12 10 0	..	13 10 0
Third yellow deals, 3 in. by 11 in.	14 0 0	..	15 0 0
Do. 3 in. by 9 in.	13 10 0	..	14 10 0
Battens	11 10 0	..	12 10 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	16 10 0	..	17 10 0
First white deals, 3 in. by 9 in.	14 10 0	..	15 10 0
Battens	13 0 0	..	13 10 0
Second white deals, 3 in. by 11 in.	14 10 0	..	15 10 0
Second white deals, 3 in. by 9 in.	13 0 0	..	14 0 0
Battens	12 0 0	..	12 10 0
Pitch-pine: deals	25 0 0	..	26 10 0
Under 2 in. thick extra	0 10 0	..	1 0 0
Columbian or Oregon Pine, best quality	23 10 0	..	26 0 0
Yellow Pine—First, regular sizes	50 0 0		upwards.
Oddments	35 0 0		„
Seconds, regular sizes	36 0 0		„
Oddments	31 0 0		„
Kauri Pine—Planks per ft. cube	0 5 6	..	0 6 6
Danzig and Stettin Oak Logs—Large, per ft. cube	0 3 0	..	0 3 9
Small „ „	0 2 6	..	0 3 0
Wainscot Oak Logs, per ft. cub	0 7 6	..	0 9 0
Dry Wainscot Oak, per ft. super. as inch	0 0 10	..	0 1 2
¼ in. do. do.	0 0 9	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super. as inch	0 0 10	..	0 1 3
Selected, Figury, per ft. super. as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 4	..	0 2 6
			upwards.
Dry Walnut, American, per ft. super. as inch	0 0 10	..	0 1 2
French, "Italian," Walnut	0 0 10	..	0 1 4
Teak, per load (Rangoon or Moulmein)	20 10 0	..	26 0 0
Do., do. (Java)	19 0 0	..	22 10 0
American Whitewood planks, per ft. cube	0 5 6	..	0 6 6
Prepared Flooring, etc.—	Per square.		
1 in. by 7 in. yellow, planed and shot	0 14 6	..	0 18 0
1 in. by 7 in. yellow, planed and matched	0 14 9	..	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 17 6	..	1 3 0
1 in. by 7 in. white, planed and shot	0 14 0	..	0 16 0
1 in. by 7 in. white, planed and matched	0 14 3	..	0 16 6
1¼ in. by 7 in. white, planed and matched	0 16 6	..	0 8 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0 12 6	..	0 15 0
1 in. by 7 in.	0 15 0	..	0 18 6
¾ in. by 7 in. white „ „	0 12 0	..	0 14 0
1 in. by 7 in. „ „	0 14 6	..	0 16 6

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections	9 0 0	..	10 0 0
Compound Girders, ordinary sections	11 0 0	..	12 0 0
Steel Compound Stanchions	12 0 0	..	13 0 0
Angles, Tees, and Channels, ordinary sections	11 0 0	..	12 0 0
Flitch Plates	11 0 0	..	12 0 0
Cast Iron Columns & Stanchions, including ordinary patterns	8 10 0	..	9 0 0

METALS.

IRON—	Per ton, in London. £ s. d.		£ s. d.
Common Bars	9 0 0	..	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0	..	9 15 0
Staffordshire "Marked Bars"	11 0 0	..	—
Mild Steel Bars	9 5 0	..	9 15 0
Hoop Iron, basis price	10 0 0	..	—
„ „ Galvanised	17 10 0	..	—

(* And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	10 5 0	..	—
„ „ 24 g.	11 5 0	..	—
„ „ 26 g.	12 15 0	..	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	..	—
Ordinary sizes to 22 g. and 24 g.	16 0 0	..	—
Ordinary sizes to 26 g.	17 0 0	..	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0	..	—
„ „ 22 g. and 24 g.	19 0 0	..	—
Ordinary sizes to 26 g.	20 10 0	..	—
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	15 0 0	..	—
Ordinary sizes, 22 g. and 24 g.	15 5 0	..	—
Ordinary sizes, 26 g.	16 15 0	..	—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.		£ s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	13 10 0	..	—
Best Soft Steel Sheets, 26 g.	15 10 0	..	—
Cut Nails, 3 in. to 6 in.	11 0 0	..	11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

LEAD—Sheet, English, 4 lb. and up	£ s. d.		
	24 10 0	..	—
Pipe in coils	25 0 0	..	—
Soil pipe	28 0 0	..	—
Compo pipe	28 0 0	..	—
ZINC—Sheet—	In casks of 10 cwt.		
Vielle Montagne	28 5 0	..	—
Silesian	28 10 0	..	—

Zinc, in bundles, 1s. per cwt. extra.

COPPER—				
Strong Sheet	per lb.	0 1 1	..	—
Thin „	„	0 1 2	..	—
Copper nails	„	0 1 0	..	—
Copper wire	„	0 1 0	..	—
BRASS— Strong Sheet	„	0 1 0	..	—
Thin	„	0 1 1	..	—
TIN—English Ingots	„	0 1 11	..	—
SOLDER—Plumbers'	„	0 0 10	..	—
Tinmen's	„	0 1 1	..	—
Blowpipe	„	0 1 3	..	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	8½d.
„ fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	„ fourths	4½d.
„ fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	„ 21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

¼ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅛ Rough rolled and rough cast plate	2¾d.		
¼ Rough rolled and rough cast plate	3d.	Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 0
„ „ „ in barrels	„	0 2 1
„ „ „ in drums	„	0 2 3
Boiled „ „ in barrels	„	0 2 3
„ „ „ in drums	„	0 2 6
Turpentine in barrels	„	0 2 9
„ in drums	„	0 2 11
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		30 15 0
Red Lead, Dry	per ton	28 10 0
Best Linseed Oil Putty	per cwt.	0 2 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 12 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 6
French and Brush Polish	0 10 0

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. on *Wednesday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

CANNOCK.—For sewerage work, etc., on Sewage Farm, for the Urban District Council :—
Trentham, Ltd.* £8,297 12 9

CANNOCK.—For construction of Pye Green-road sewer, for the Urban District Council :—
Trentham, Ltd.* £431

CHRISTCHURCH.—For conversion of laundry at Workhouse into stores, etc., for the Board of Guardians :—
B. Jenkins, Christchurch* £664 1 1

CROWBOROUGH.—For private street works on Warren and Goldsmiths Estates, for the East Grinstead Rural District Council :—
Hutchinson & Co.* £3,153 10 10

DERBY.—For painting two wards at Asylum, for the Town Council :—
Peach, Ward, & Co.* £2 9 15

DURHAM.—For erection of a dwelling-house at High Springwell, for Mr. Wm. Smith. Mr. H. T. Gradon, A.R.I.B.A., architect, Durham :—
Gibson & Bro., Durham £706 6 9

GOSBERTON.—For heating arrangements at school, for the Education Authority :—
Hutton Bros., Boston* £103 15 6

IPSWICH.—For extension of Workhouse Infirmary, for Ipswich Board of Guardians :—
E. Catchpool & Sons* £7,943

KENDAL.—For sewage disposal works, for the Kendal Corporation :—
C. Bushby & Sons, Leeds* £1,131 16

LONDON.—For proposed alterations and decorative work, Nos. 44 and 46, Harleyford-road, S.E., for the owner. Messrs. Gordon Wilson & Co., architects, 1, Vaughan-avenue, Goldhawk-road, Hammersmith, W. :—

Constructional Work, Lighting, Heating, and Drainage (including Adjustment on Drainage).

W. Smith & Sons	£872 9 1	J. Selway & Sons	£852 1 4
J. Galpin & Sons	825 8 0	Sims & Sons* ...	790 18 6

Painting and Decorating.

J. Selway & Sons	£149 1 3	H. Cooke	£105 6 0
J. Galpin & Sons	124 18 0	W. Smith & Sons	98 0 0
Sims & Sons* ...	124 15 4		

LONDON.—For installing heating apparatus in Lancaster-road School, for the London County Council :—

Palowkar & Sons	£1,282	J. & F. May	£997
J Yetton & Co., Ltd.	1,075	H. J. Cash & Co., Ltd.	972
W. J. Burroughes, & Sons	1,070	G. & E. Bradley	899
Cannon & Hefford...	1,026	W. G. Cannon & Sons, Ltd., 107, London-road, Southwark*...	895
Brightside Foundry and Engineering Co., Ltd.....	1,015		

LONDON.—For the installation of heating and hot-water plant at the eleventh asylum to be erected by the London County Council :—

G. N. Haden & Sons	£26,194 0	Korting Bros....	£22,789 7
Ashwell & Nesbit	24,467 0	Brightside Foundry and Engineering Co., Sheffield*	21,760 0
Strode & Co. ...	23,890 0		
Dargue Griffiths & Co.	23,293 12		

LONDON.—For alterations and additions to No. 2, Mile End-road, for Farrow's Bank, Ltd. Messrs. G. Reginald Farrow, A.R.I.B.A., & Sydney R. Turner, architects, Amberley House, Norfolk-street, Strand, London, W.C. :—

E. B. Holmes	£870	G. Barker*	£608
Weightman	755	Crisp-Fowler	580

[Architect's estimate, £750.]

Counter.

Hibbert Bros.	£136 10	Steinberg & Co.* ...	£94 0
Burkle & Sons	95 0		

[Architect's estimate comparable with tenders, £100.]

MALDON.—For erection of Headquarters, for Essex County Territorial Association :—
Myall Bros., Southend-on-Sea* £2,276

MELKSHAM.—For erection of new school, for Wiltshire Education Committee :—
Sturgess Bros., Applesham* £4,600

MIDDLESEX.—For the laying of radiated granite paving on the Durax system on Moor. Mead. and Cranford county bridges and the approaches, and for the maintenance of the paving for a period of five years from the date of the completion of the work, for the Middlesex County Council :—
Durax Dustless Roads, Ltd.* £2,383 6 8

POOLE.—For street works, Crescent-road, for the Poole Town Council :—
G. Maidment* £370

POOLE.—For rebuilding the Fish Market, for the Corporation :—
E. P. Pearcey, Parkstone* £734 10

ROMFORD.—For private street works in Kingston-road, for the Urban District Council :—
B. H. Hale, Romford* £592 11

SOUTHEND-ON-SEA.—For extension of main and upper deck on east side of new pier-head, for the Corporation :—
Charles Wall, Ltd., London* £12,111

TORQUAY.—For construction of swimming bath and medical baths, for the Torquay Corporation :—
E. P. Bovey & Son* £14,912

TORQUAY.—For villa, Audley Park, Torquay, for Mr. James Magor. Mr. F. G. Moore, B.Sc., architect and surveyor, 9, Fleet-street, Torquay :—
R. E. Narracott, Torquay‡ £350

‡ Recommended for acceptance.

TORQUAY.—For pair of villas, Studley-road, Torquay, for Mr. B. Bradley. Mr. F. G. Moore, B.Sc., architect and surveyor, 9, Fleet-street, Torquay :—

Wilkins & Sons	£1,621	R. E. Narracott, Torquay‡	£1,135
A. N. Coles	1,591		
E. P. Bovey & Son..	1,400		

‡ Recommended for acceptance, subject to slight amendments.

WALLSEND.—For constructing sewer and road to the Cemetery, for the Wallsend Town Council :—
W. Bobson, Newcastle-on-Tyne,* £111 13s. for sewer, and £922 16s. for road.

WORCESTER.—For extension of Newtown Hospital, for City Corporation :—
H. J. Probert* £2,755 11

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
69 and 70, Dean-street,
Soho, W.

JOINERY,
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.,
ESTIMATES ON APPLICATION.
COLNE BANK WORKS, COLCHESTER.
Telephone: 6195. Telegrams: "Orfeur, Colchester."

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone: Avenue 4940 (two lines), or write—
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mines*).

ALSO AT DEPTFORD, LIVERPOOL, BRISTOL,
GLASGOW, FALKIRK, BELFAST, & DUBLIN.
Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.